Fall report

DIGITAL
ECOSYSTEM DIGEST

2023

GENAI IN GEORGIA: EARLY CHALLENGES AND EXISTING CUSTUMER PRACTICES

BTU | BUSINESS & TECHNOLOGY UNIVERSITY

WHAT IS DIGITAL ECOSYSTEM DIGEST?

Digital Ecosystem Digest is a quarterly electronic research report published by BTU's Centers for Entrepreneurship and Research.

The report reviews the current technological and innovation trends in various sectors of the digital economy of Georgia and covers such topics as: startups in digital business, e-commerce markets, digital platforms (B2B, B2C or C2C), fintech technologies, etc.

The purpose of the report is to gather existing information and generate new practical knowledge about the digital economy. Research reports will be coauthored by different researchers.

The authors of the current edition are BTU's affiliated academic staff - Tsotne Zhghenti and Vakhtang Chkareuli, BTU's research students - Lazare Kapanadze and Mariam Chrikishvili.

INTRODUCTION

Artificial intelligence (AI) has become an increasingly crucial technology for businesses, especially for SMEs and individual entrepreneurs who lack the opportunity to attract and retain professionals with extensive background in the field of expertise. As an emerging economy, Georgia has much to gain from adopting AI tools like large language models such as GenAI. Implementing GenAI can help businesses boost efficiency, lower costs, and enhance their competitive edge.

The key advantage of GenAI is its ability to understand and generate human-like text and speech. Unlike previous AI systems, GenAI can comprehend complex instructions and requests provided in natural language. It can then respond appropriately, whether that's answering questions, summarizing lengthy documents, translating between languages, or generating new content.

Global GenAI market size: $15.7 billion in 2022, expected to reach $118.6 billion by 2028 (MarketsandMarkets, 2023). Statista (2023) is estimated market will reach US$207.00bn by 2030.

McKinsey research shows that gen AI could enable automation of up to 70 percent of business activities, across almost all occupations, between now and 2030.

However, the recent rapid changes, according to Gartner, we are currently approaching the "peak of inflated expectations," which will be succeeded by a minor decline in expectations, eventually leading to a "plateau of productivity" in the long term.

For a developing country like Georgia, deploying GenAI can accelerate economic growth and productivity. GenAI systems can automate repetitive administrative tasks, freeing up employees' time for higher-value work. The technology can also minimize costly errors in areas like data entry by recognizing patterns and processing information more accurately than humans.
Additionally, GenAI can level the playing field for Georgian businesses looking to expand globally. The ability to fluently communicate in many languages gives companies an edge in reaching new markets and customers worldwide. Investing in GenAI now can help local businesses compete with international rivals.

To maximize the benefits of implementing GenAI, Georgian companies should focus on functions like:
• Generate personalized marketing materials: GenAI can be used to generate personalized marketing materials, such as email campaigns, social media posts, and website copy. This can help businesses to reach their target customers more effectively and increase sales.

• Customer service automation - Use GenAI chatbots and virtual assistants to efficiently handle customer inquiries and requests
• Multi-language content creation - Generate original, nuanced content in different languages for global marketing and communications
• Data analysis and forecasting - Uncover hidden insights from complex data sets and improve predictive capabilities
• Automated report generation - Let GenAI synthesize key information and produce detailed reports, allowing employees to be more strategic
• Automate tasks and processes: GenAI can be used to automate tasks and processes, such as customer service, data entry, and social media management. This can free up employees to focus on more strategic work.

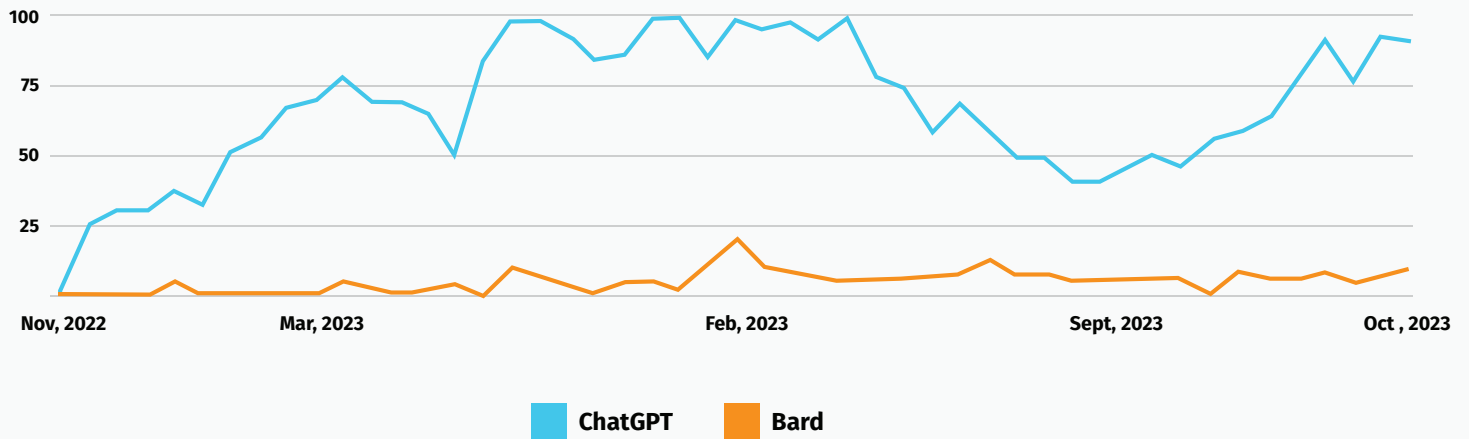## List of Several Popular GenAI tools for Daily Work

TOOL	DESCRIPTION AND KEY USES FOR MAXIMUM PRODUCTIVITY
ChatGPT 3.5/4.0	Generating or editing text, writing different kinds of creative content and answering questions in an informative way. Has both free and paid versions. Paid versions enable photo/file uploads, web browsing and creating visuals with DALL-E.
Bing Chat	Generating text and answering questions based on web search results. Uses the GPT system and is optimal for search-based inquiries.
Bard	Generating text, writing different kinds of creative content, and answering questions in an informative way. Uses internet, making it ideal for generating text when up-to-date information is required.
Claude 2	Generating or editing text, writing different kinds of creative content, especially good at analyzing large volumes of text. Allows for multiple file uploads. Paid versions offers less limitations.
DALL-E 3	Generating images from text descriptions. Can be used for free via Bing or integrated in the paid version of ChatGPT.
Adobe Firefly	Generating and editing images, matching the style from a reference image and features a generative fill option. A paid version is required for extended usage. It is also integrated in other Adobe products.
Midjourney	Generating images from text descriptions, especially good at art illustrations. Requires a subscription to use.
Stable Diffusion	Generating images from text descriptions. Requires a subscription to use.

As an adaptable and cost-effective AI solution for businesses, GenAI is set to become a critical driver of innovation and economic progress in Georgia. By embracing this technology early on, Georgian companies can gain a competitive advantage both locally and globally.

The current report examines the growing popularity of GenAI among the local users and delves into the features and challenges of utilizing AI tools professionally in Georgia. Data were drawn from a qualitative study of select active GenAI users within the region (Field period: September 28 - November 4, 2023, with 82 participants across various industries). The demographic breakdown includes 80% under 30 years of age and a 60% female representation.

SEARCH TRENDS ON GENAI

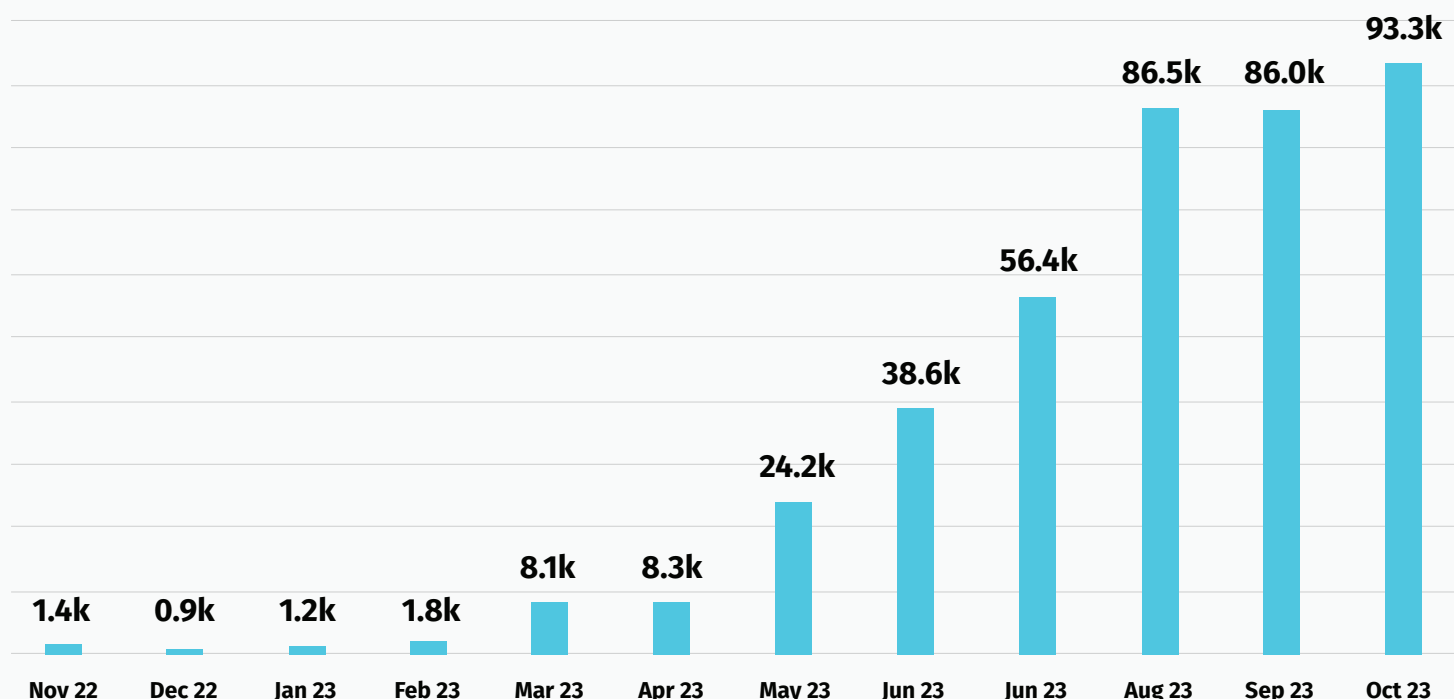## Interest in ChatGPT and Bard in Google system from Georgia

Legend: ChatGPT (blue), Bard (orange)

X-axis: Nov, 2022 — Mar, 2023 — Feb, 2023 — Sept, 2023 — Oct , 2023

Y-axis: 100, 75, 50, 25

Interest in Text GenAI tools was peaked in May in Georgia

The data was collected using Google Trends, a public web service from Google that tracks how often specific keywords, subjects, or phrases have been searched for over a specific period. This data covers the time frame from January 2023 to October 2023 in Georgia and shows that interest in ChatGPT was gradually increasing in late 2022 and early 2023. The first peak of interest occurred in March, with the highest peak following in May. This was then succeeded by a decrease in search interest during the summer months, but interest saw a stable growth starting from September. In comparison to ChatGPT, interest in Bard is significantly lower in Georgia. Bard's interest also peaked in May but has been mostly flat since then. The interest on those keywords originated mostly from Tbilisi and other urban areas.

WEB TRAFFIC TO GENERATIVE AI TOOL PAGES

Monthly Visitors (thousands) on OpenAI website from Georgia

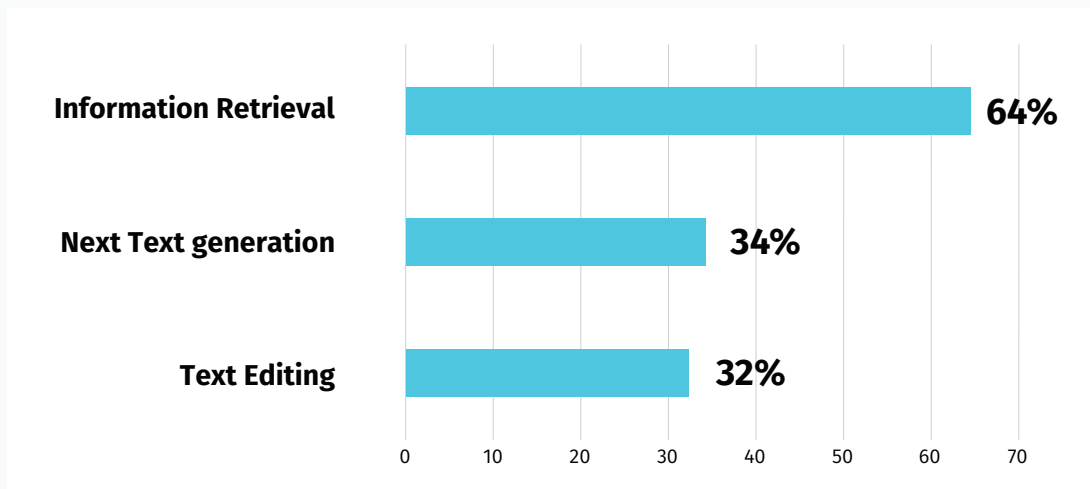| Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jun 23	Aug 23	Sep 23	Oct 23
1.4k	0.9k	1.2k	1.8k	8.1k	8.3k	24.2k	38.6k	56.4k	86.5k	86.0k	93.3k

Note: The number is calculated for the average monthly users by the first day of the end on moth day.

OpenAI website traffic from Georgia was boostedin May and through the summer.

Similar to search trends, website traffic from Georgia to the OpenAI page (which hosts ChatGPT and DALL-E) began rising in early spring in 2023. Visitor numbers in May were three times that of April, and this rapid growth rates persisted through the summer (June - 60%, July – 46%, August- 53%) peaking in August with total 86.5 thousand visitors. The growth was continued in Autumn with a new peak of 93.3 visitors during October. It's worth noting that the ChatGPT mobile app was launched for iOS and Android users during the summer, so some visits might not be reflected in this graph.

GENAI USAGE PATTERNS IN GEORGIA

Which GenAI Functions are Primarily Utilized by Selected Active Users in Georgia?

Primary Areas Where GenAI Functions are Useful as Reported by Users

Social Media Management

Daily Tasks

Project Management

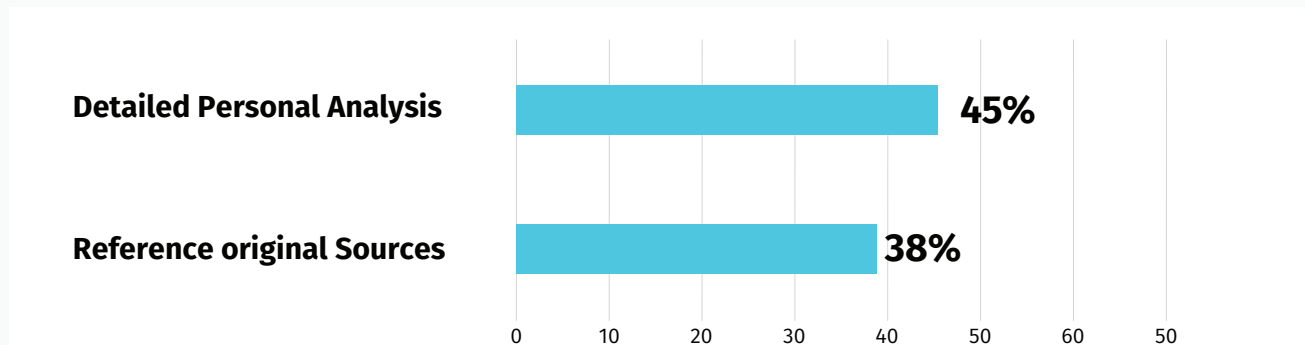Personal Development

Acedemic or Business Research

Note: Active users were able to mention several primary functions.

Information Retrieval emerges as the predominant function, with 59% of users primarily utilizing this feature. This prominence is logical and can be attributed to the increasing need for quick and accurate information in today's fast-paced digital age. The next two popular functions relate to working with texts: New Text Generation, preferred by 47% of users, which mostly used in draft creation for blogging, academic writing and business communications. The slightly lower preference for editing existing texts, at 38%, which has its benefits for users by saving time and resources after creating original content. Therefore, users mention that they have more time for their primary job.

Following the aforementioned general functions, other notable preferences include more specific functions for certain job categories including code generation, data analysis, as well as image and voice editing/generation. Additionally, a significant number of users turn to GenAI for drafting ideas for various projects.

QUALITY CHECK METHODS FOR GENAI OUTPUTS IN GEORGIA

How Do Selected Active Users Measure the Quality of GenAI Output?

Detailed Personal Analysis — 45%

Reference original Sources — 38%

Note: Active users were able to mention several methods.

When it comes to checking the quality of GenAI outputs, users mainly use two methods:

Detailed Personal Analysis: This method is chosen by 43% of users. They take a close look at the AI-generated content to judge its accuracy. This approach needs a good understanding of the topic, and sometimes, special knowledge about the subject.
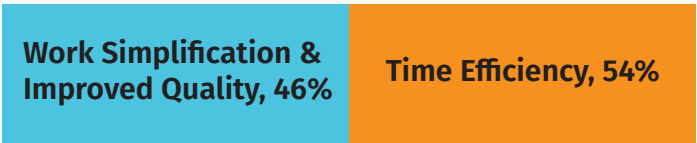
Reference Original Sources: 33% of users prefer this method. They compare the AI output with trusted sources to see if it's correct. This way, they can make sure the content is both original and in line with trusted information.

There are also some users who trust the AI so much that they might not check the content at all. They rely heavily on what the AI provides.
A few users try a different approach. They use more than one GenAI tool at the same time to check the content's accuracy. Even though this sounds like a good idea, not many users do this. Most people prefer simpler ways to check the quality of the content.

PRIMARY BENEFITS OF EARLY GENAI ADOPTION IN WORK PROCESSES IN GEORGIA

Which Benefit of GenAI Usage Holds Greater Significance?

Work Simplification & Improved Quality, 46%	Time Efficiency, 54%

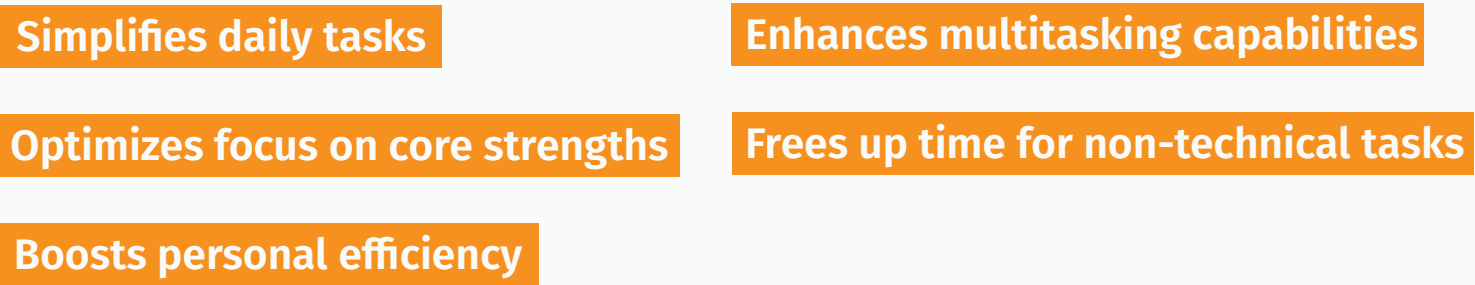Note: Categories of benefits were refined from user responses.

The introduction of GenAI into the working environment in Georgia has brought about notable advantages, making tasks not only more manageable but also enhancing their quality. When analyzing feedback from the study's respondents, two primary benefits consistently emerged: Work Simplification & Improved Quality and Time Efficiency.

It's evident that while both advantages were frequently highlighted by users, distinguishing which held more importance was key to understanding GenAI's immediate impact on workers. According to our qualitative research, 61% of active GenAI users felt that Time Efficiency was the predominant benefit they experienced. This points to a significant preference for GenAI's ability to streamline various work processes, allowing professionals to manage their time better.

On the other hand, the 39% who emphasized Work Simplification & Improved Quality as their main benefit found that GenAI not only simplified their tasks but also improved the output quality. While speed is crucial for many, a significant segment of users values the ease and enhanced quality GenAI introduces to their work.

While both benefits resonate with users, the data suggests Time Efficiency as the more vital advantage for the majority of users in the early stages of GenAI adoption.

Primary Benefits of GenAI as Reported by Users

Simplifies daily tasks

Enhances multitasking capabilities

Optimizes focus on core strengths

Frees up time for non-technical tasks

Boosts personal efficiency

DISCOVERING NEW GENAI TOOLS AND LEARNING APPROACHES IN GEORGIA

How Do Users Prioritize their GenAI Training?

Exploring and Learning New GenAI Tools, 61%	Advancing Knowledge on Known GenAI Tools, 39%

50% Finding new GenAI tools in social media

Note: Users which are only intereseted in self-training are excluded from the graph.

Exploring and Learning New GenAI Tools is a primary focus for 60% of the active GenAI users in the research. They are eager to delve into new tools that can streamline their processes and offer advanced solutions. Conversely, 40% of users are intent on Advancing Knowledge on Known and popular GenAI Tools. They recognize the value of deepening their understanding of existing tools to extract maximum efficiency and benefit.

However, there's an important trend among active GenAI users. They are less inclined towards generalized training sessions or broad learning activities. The vast ocean of readily available information on the internet, particularly on social media are the source for general knowledge. (Note: A significant 50% of selected users reported discovering new GenAI tools through social media). What they seek is a deeper dive - a shared, hands-on experience of using GenAI tools. They are curious about other potential tools relevant to their work, practical ways on how to integrate them and more effortless strategies. For these users, learning shouldn't be just about consuming content; it's about interaction and real-time exchanges.
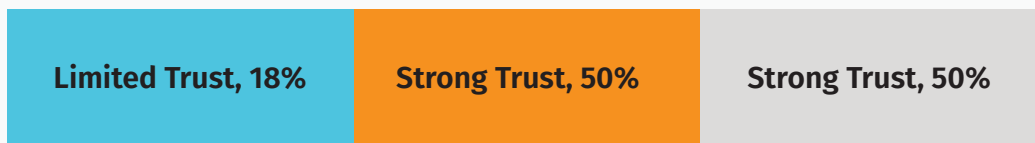
boostedin

Furthermore, a notable group of users prefers a self-driven approach. They are not particularly keen on structured training. Instead, they rely on the vast web content, continually updating and enhancing their knowledge base manually.

Key Reasons for Seeking GenAI Training

Quick Setup

Efficient Usage

Prompt Engineering

Underrated Useful Tools

Implementing Tools in Practice

PERCEIVED TRUSTWORTHINESS OF GENAI CONTENT

How much do those around you trust GenAI content?

Limited Trust, 18%	Strong Trust, 50%	Strong Trust, 50%

Note: Responses were proceed to determine the users's perspective.

Based on BTU's qualitative research conducted in October 2023, we found that a significant portion of active GenAI users perceive those around them to have a strong trust in GenAI content. When asked to describe this trust through open-ended responses, 55% of the interpretations aligned with what we categorized as "strong trust." Conversely, 26% of the descriptions were classified under "limited trust," and 19% under "moderate trust."

It's essential to highlight that our respondents are active GenAI users deeply connected with technological tools. Their insights offer a unique perspective on how GenAI content is viewed within their immediate environment. While these results are not and should not represent the broader population's views on GenAI, they do show the potential influence active GenAI users can have in promoting GenAI content in their professional spheres and to a select audience.

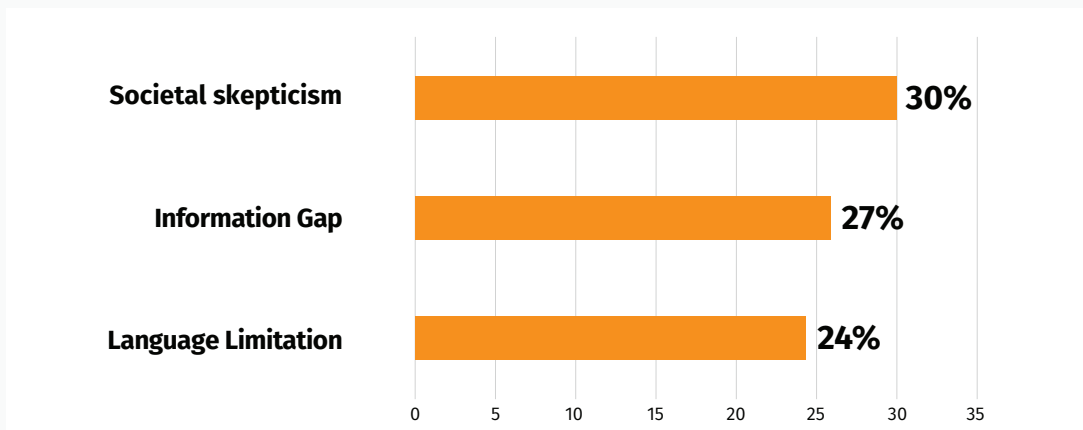**Primary Challenges of GenAI Usage as Reported by Users**

Handling confidential projects

Oversupply of disappointing AI services

Incompatibility with the Georgian language

CURRENT CHALLENGES FACED IN GENAI ADOPTION IN GEORGIA

What are Major Origins of Challenges for GenAI Adoption from Your Perspective?

Note: Categories of challanges were refined from original user responses. Active users were able to mention several challenges.

The graph illustrates the primary concerns that users believe could impede the broader acceptance of GenAI in their respective sectors.

Language Limitation: A prominent challenge for GenAI adoption in Georgia is the language barrier. Approximately 24% of respondents pinpointed this as a significant issue. Nearly all users confirmed that they currently cannot process data in the Georgian language using GenAI tools. Without the necessary linguistic capabilities, the potential of these tools remains largely unrealized in the region.

Societal Skepticism: The human element plays a vital role in the adoption of new technologies. While a segment of users possesses trust in technology, a more considerable portion remains resistant to change. This resistance often stems not from distrust in technology itself, but from a general hesitancy towards innovations. The unfamiliarity breeds caution, and in many cases, this cautious approach translates to a reluctance in embracing new technological solutions like GenAI.

Information Gap: A notable portion of the populace remains unaware of the benefits and capabilities of GenAI tools. Even when there's a basic awareness, the next challenge is the lack of in-depth knowledge about how to utilize these tools effectively. This dual-layered knowledge gap — awareness of tools and understanding of their usage — hinders many from fully leveraging the potential of GenAI.

In addition to the primary challenges highlighted above, several respondents pointed to other concerns impacting the perception and usage of GenAI. Confidentiality Issues were flagged by a subset of users, with concerns about data privacy and the potential misuse of information. Some respondents also mentioned having had negative experiences with certain GenAI tools, which subsequently can change the perception of the entire technology segment.

Conclusion

GenAI tools are undergoing rapid transformations on a daily basis, introducing new trends and developments even as we discuss their implications. With 2024 poised to be a pivotal year for the adoption of GenAI tools in businesses globally, it becomes paramount for Georgia to swiftly align with these evolving trends.

Our research indicates a clear enthusiasm among active GenAI users in Georgia for more efficient and effective tools. While there is a strong level of trust among these users and their immediate circles, it's worth noting that this perspective may not be representative of the wider populace. The language barrier stands as a significant challenge, with the majority emphasizing the inadequacy of current tools in catering to the Georgian language. Societal skepticism further compounds the challenges, rooted not just in mistrust of technology but also a general hesitancy towards embracing innovation. This hesitation is exacerbated by the prevalent information gap, with many unaware of the vast potential GenAI offers or lacking the know-how to harness it effectively.

Beyond these primary challenges, the report also sheds light on concerns related to confidentiality and the reliability of certain GenAI tools.

As GenAI continues to reshape global industries, it's imperative for Georgia to address these challenges head-on. Doing so will not only foster a conducive environment for GenAI adoption but also position the country to leverage the transformative power of these tools in the coming years.

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