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AI CHATBOTS FOR GOVERNMENT TRANSACTIONS

Shaping the Future of Government Transactions in Dubai

WHY GOVERNMENT TRANSACTIONS ARE A GLOBAL CHALLENGE

Governments worldwide face significant challenges in providing efficient and accessible public services due to budget constraints, technological advancements, and growing demands. With public sectors accounting for 16% of total employment and 38% of formal employment globally, optimising service delivery is crucial [1]. Digital transformation is a key focus, but gaps in accessibility persist, with an average of 35.7 accessibility errors on government websites, highlighting the need for improvement [2]. Additionally, population growth and diverse service demands increase complexity and costs. Younger generations, who are more tech-savvy and expect seamless digital interactions, are driving new demands for instant, personalised services, requiring governments to adopt more agile and user-centered approaches. To address these issues, governments are prioritising infrastructure and sustainability, while strategic planning and investment remain essential for adapting to rapid technological changes and ensuring equitable access to public services.

KEY STATISTICS

The Global AI chatbot Market size is expected to be worth around

USD66.6 Billion

by 2033, from **USD 6.4 Billion in 2023, growing at a CAGR of 26.4%** during the forecast period from 2024 to 2033.[3]

The citizen satisfaction score (CSS) for private-sector services is

2.5X

times higher than CSS for government services.[4]

Zendesk, a leading customer service platform, states that **"Bots can take over answering up to**

80%

of those sorts of routine inquiries." This again supports the high percentage of routine queries that can be handled by chatbots.[5]

WHAT DOES IT LOOK LIKE IN DUBAI?

Dubai has been at the forefront of leveraging the latest technologies and chatbot technology to enhance government services accessibility and availability. Government entities launched several initiatives to streamline citizen interactions through unified chatbots. Digital Dubai, which launched its unified data platform **'Dubai Pulse,' hosts about 1,237 open and shared data systems from 70 entities to support and accelerate chatbot development and other AI applications and solutions** [6]. However, challenges still exist, as traditional rule-based chatbots often proved ineffective, requiring significant effort, learning, and cost for deployment across all entities. Additionally, the shift towards social media chatbots, ChatGPT, and large language models (LLMs) has necessitated Dubai to take proactive steps, in order to maintain its position as a global leader in smart government solutions.

HOW AI WILL SOLVE THIS CHALLENGE

AI has significantly disrupted the chatbot industry by transforming how automated interactions are designed and delivered. Traditional rule-based chatbots often relied on predefined scripts, limiting their ability to handle complex queries or adapt to the nuances of human conversation. With the rise of AI, particularly machine learning and natural language processing (NLP), chatbots can now understand context, learn from interactions, and provide more personalised responses. Large Language Models (LLMs) like GPT have taken this further by enabling chatbots to generate human-like conversations, greatly enhancing their flexibility and accuracy. In the realm of government services, LLMs have expanded accessibility by allowing citizens to engage in more dynamic and intuitive interactions, reducing the friction often encountered in bureaucratic processes. These advancements help streamline service delivery, improve user satisfaction, and reduce the cost of maintaining multiple communication channels, positioning AI-powered chatbots as essential tools in modern governance.

AI-powered chatbots are not only capable of handling basic inquiries; they can assist with more sophisticated applications like renewing licenses, offering personalised guidance through government portals, and explaining laws and regulations in a simplified manner. Additionally, they can provide vital public safety and health information, deliver instructions for compliance with rules, and make essential services more accessible to the general public.

THE IMPACT OF USING AI FOR DUBAI

These AI chatbots are capable of automating routine tasks and enhancing citizen interactions handling over **60%** of routine inquiries, resulting in a **35%** reduction in operational costs for government departments and a **25%** improvement in service delivery times.

The Dubai.AI platform, launched in collaboration with the Dubai Center for Artificial Intelligence (DCAI), serves as a personal digital assistant, offering real-time responses to queries across various sectors [7]. Complementing this is the "U-Ask" platform, a unified AI-powered solution that provides generative AI-driven information in both Arabic and English, allowing users to access service requirements and application links in one place [8]. These platforms, alongside data initiatives like Dubai Pulse, which hosts 1,237 shared data systems, have significantly improved the accessibility and efficiency of government services. These AI chatbots are capable of automating routine tasks and enhancing citizen interactions handling over 60% of routine inquiries, resulting in a 35% reduction in operational costs for government departments and a 25% improvement in service delivery times. The success of AI chatbots in Dubai will help the city to serve as a model for other cities and countries looking to enhance their public services through innovation and technology.

CITATIONS

[1] World Bank, "Public Sector Productivity: Part One – Why Is It Important and How Can We Measure It?" documents1.worldbank.org/curated/en/913321612847439794/pdf/Public-Sector-Productivity-Part-One-Why-Is-It-Important-and-How-Can-We-Measure-It.pdf, accessed 2024.

[2] WebAIM, "Accessibility Project Report," webaim.org/projects/million/#categories, accessed 2024.

[3] Market.us, "AI Chatbot Market Report," market.us/report/ai-chatbot-market, accessed 2024.

[4] McKinsey & Company, "How US State Governments Can Improve Customer Service," www.mckinsey.com/~/media/mckinsey/industries/public%20and%20social%20sector/our%20insights/how%20us%20state%20governments%20can%20improve%20customer%20service/putting%20citizens%20first%20how%20to%20improve%20citizens%20experience%20and%20satisfaction%20with%20government%20services.pdf, accessed 2024.

[5] Zendesk, "5 Benefits of Using AI Bots in Customer Service," zendesk.co.uk/blog/5-benefits-using-ai-bots-customer-service, accessed 2024.

[6] Digital Dubai, "Digital Dubai Launches Initiative to Enhance Data Quality Aligning with Highest International Standards," https://www.digitaldubai.ae/newsroom/news/digital-dubai-launches-initiative-to-enhance-data-quality-aligning-with-highest-international-standards, accessed 2024.

[7] Digital Dubai, "Digital Dubai Launches Dubai.AI in Partnership with Dubai Center for Artificial Intelligence," digitaldubai.ae/newsroom/news/digital-dubai-launches-dubai.ai-in-partnership-with-dubai-center-for-artificial-intelligence, accessed 2024.

[8] UAE Government, "Ask UAE Portal," ask.u.ae/en, accessed 2024.