

# Quickpass IoT Device for Gate Entry



## Executive Summary

QuickPass is a renowned visitor management solutions provider. Used by hundreds of gated residential and business communities nationwide, their sophisticated system has revolutionized the gated access industry.

For this project, Quickpass was in need of a solution to replace the Twilio Autopilot tool which they had relied on for its Text to Quick functionality. Envative was tasked with the challenge of building the replacement solution because Autopilot was being deprecated.

## Challenges

- Seamlessly implement and maintain the same operational efficiency and functionality that Autopilot provided within the QuickPass system.
- To ensure success, Envative needed to thoroughly understand the implications of Autopilot's deprecation and the specific requirements for the replacement solution. Several consultation sessions were required to get to that point.

## The Solution

Envative proposed and executed a replacement solution, leveraging AWS services like AWS Lex for building conversational interfaces, AWS Lambda for running code without provisioning or managing servers, and AWS CodeCommit for source control services.

## Why AWS?

Building a well-designed bot requires several different considerations. These include requirements gathering and discovery, conversational design, testing through automation and with users, and monitoring and optimizing the bot.

AWS has simplified the various aspects of such development with [Amazon Lex](#), a fully managed artificial intelligence (AI) service with advanced natural language models to design, build, test, and deploy conversational interfaces in applications.

In addition, **Amazon Lex** natively supports integration with [AWS Lambda](#) for data retrieval, updates, and business logic execution.

The intuitive design, comprehensive features, and integration functionality of **Lex** allowed Envative to successfully achieve QuickPass's goals in an efficient and cost-effective manner.



## Partner Solution:

The solution centered around constructing a Lex bot capable of interacting with the Twilio platform and collecting necessary information like Visitor Name, Community to add Visitor, and Number of Days.

The Lex bot was then integrated with Lambda functions, which parsed the Twilio payload to the Lex model and enacted necessary logic functions.

It was configured to interact with the existing API to perform operations such as user lookup, visitor addition, and response return based on information from the bot slots or user prompts.

## Results and Benefits:

- Utilizing Amazon Tools and Services allowed Envative to develop a robust, yet cost-effective solution that reliably scales from tens to tens of thousands of devices without having to worry about maintaining the underlying infrastructure.
- The serverless compute capacity allows effortless execution of business logic at scale.
- Automation of code to send and retrieve data from external system.

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