

# Policy Manual Chatbot for People and Culture Department

## *EXPECTED PROJECT COSTS*

### **Project Overview**

This proposal outlines the expected costs associated with implementing a WhatsApp-based policy manual chatbot for the People and Culture department. The chatbot will handle user inquiries related to Strathmore University's People and Culture policies via WhatsApp, with each interaction involving a question and response facilitated through an API call.

### **Key Assumptions**

1. Number of Users: 100
2. Questions per User per Day: 20
3. Number of Days in a Month: 30

Based on the above assumptions we are going to make the following estimates listed below

## **Expected Daily Operations**

### **1. Total Questions per Day:**

$100 \text{ users} \times 20 \text{ questions/user} = 2,000 \text{ questions/day}$

### **2. Total Messages per Day:**

$2,000 \text{ questions/day} \times 2 \text{ messages/question} = 4,000 \text{ messages/day}$

### **3. Total API Calls per Day:**

2,000 API calls/day

## **Monthly Operations**

### **1. Total Questions per Month:**

$2,000 \text{ questions/day} \times 30 \text{ days} = 60,000 \text{ questions/month}$

### **2. Total Messages per Month:**

$4,000 \text{ messages/day} \times 30 \text{ days} = 120,000$   
messages/month

### **3. Total API Calls per Month:**

$2,000 \text{ API calls/day} \times 30 \text{ days} = 60,000 \text{ API calls/month}$

## **Cost Breakdown**

### **1. Twilio WhatsApp Messaging**

- a) **Cost per Session Message:** \$0.005
- b) **Monthly Messages:** 120,000
- c) **Monthly Cost:**

$$120,000 \text{ messages/month} \times \$0.005 \text{ message} = \$600$$

### **2. Groq API Calls**

- a) **Cost per API Call:** \$0.01
- b) **Monthly API Calls:** 60,000
- c) **Monthly Cost:**

$$60,000 \text{ API calls/month} \times \$0.01/\text{call} = \$600$$

## **Expected Total Monthly Cost**

- 1. **Twilio Session Messages Cost:** \$600
- 2. **Groq API Calls Cost:** \$600

## **Expected Total Monthly Expense:**

$$\$600 \text{ (Twilio)} + \$600 \text{ (Groq)} = \$1,200$$

## Note on Groq Api cost;

While the **Groq API** is currently open source, there may be potential for it to become a paid service in the future. It's important to keep this in mind when planning long-term usage and budgeting.

## Conclusion

The projected monthly cost for implementing the WhatsApp-based policy manual chatbot for the People and Culture department is approximately **\$1,200**. This includes charges for **Twilio session messages** and **Groq API calls**. This estimate ensures the system can manage the expected volume of interactions efficiently while keeping the budget predictable. Future changes to the cost structure of the Groq API should also be considered as part of ongoing budget assessments.

## API and Service Links

Twilio WhatsApp Messaging: [\[Twilio WhatsApp API\]](#)

Groq API: [\[Groq API Documentation\]](#)