

CHATBOT

Implementation Plan

URBAANIA
KASVUA
VANTAA



INTRODUCTION

The Urban Growth Vantaa project developed a chatbot to map out technical and business-related challenges that companies face by using an automated dialogue path. The chatbot can be used for customer acquisition, and it enables a needs-based and targeted approach for contacting potential customers.

The idea for the chatbot stems from the services of the Urban Growth Vantaa project, particularly those related to facilitating a technological leap in SMEs. The experiences of this service show that SMEs have a growing need for support when it comes to technology projects in their organization. To offer such support, a website was conceptualized that would include tips and instructions for technological change projects. This idea was further developed in a more innovative and interactive direction, becoming a chatbot that connects companies and service providers in an automated way.



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DEMO



Below is a link to a demo version of the chatbot (in Finnish), which was built based on the Proof of Concept that the Urban Growth Vantaa project developed.

[GO TO DEMO](#)

USE CASES

THE OWNER OF THE CHATBOT
logs into the dashboard of the chatbot
on the dashboard, edits the chatbot dialogue paths
on the dashboard, edits the chatbot website
on the dashboard, includes links in the chatbot dialogues
on the dashboard, includes images in the chatbot dialogues
downloads the responses to the chatbot as an Excel file
on the dashboard, analyzes the statistics collected by the chatbot

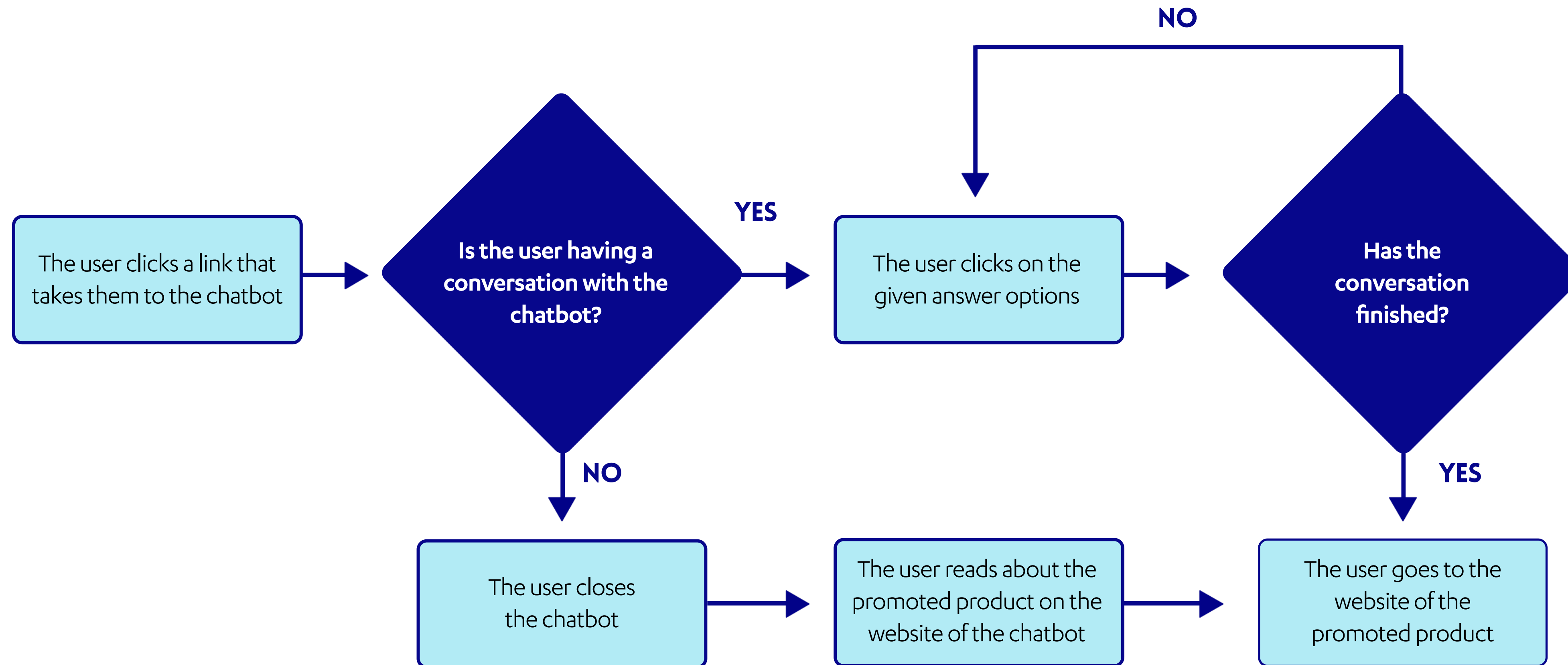
***The owner of the chatbot:** a representative of the company

THE USER
clicks the link they received by email to have a conversation with the chatbot
closes the pop-up window of the chatbot to read the text on the website
has a conversation with the chatbot using the given answer options
moves to the website of the promoted service via a link provided by the chatbot

***The user:** the person having a conversation with the chatbot

PROCESS DIAGRAM

The path of the user in the system



IMPLEMENTATION

The chatbot works as a Software as a Service (SaaS), which companies can use for interactive customer acquisition. The MIT licensed source code of the chatbot is available in the link below. The source code and the demo version can be used as a basis for further development, in accordance with the license.

PoC functionalities

- A chatbot based on a conversation tree
- Building and editing several conversation trees with the editor
- Creating a website
- Reports and analytics

Developing the chatbot further would require an estimated three months of work.

[SOURCE CODE](#)



IMPLEMENTATION

SYSTEMS AND TECHNOLOGIES



Firebase hosting, firestore

- page maintenance
- database
- analytics



Vue3

- appearance of the website
- functionalities



D3.js

- editing the conversations
- visualizing statistics



Markdown

- appearance of the conversations
- appearance of the website

FURTHER DEVELOPMENT

Using the service widely in connection with a company's regular customer service, supporting continuous automation

- a separate version of the chatbot attached to the company's website
- a more extensive automation of customer contacts
- using machine learning to advance the efficiency of the system
- implementing a chatbot without prior knowledge in programming
- releasing the editor of the conversation trees to be used freely within public administration



BUSINESS OPPORTUNITIES AND RISKS

Risks

- preconceived notions of chatbots may reduce usage
- a chatbot requires a larger number of customers than personal contacts
- poorly planned communication negatively affects the use of the chatbot

Benefits

- efficiently supports normal sales work
- provides an interactive way to fill out forms
- easy to use as part of multichannel communication
- a user friendly way to map out extensive company registers

