



# The Municipality of Oslo explores chatbots to respond to citizen requests

By partnering with Capgemini, the Municipality of Oslo develops proof of concept chatbot and RPA technology to respond to citizen and employee requests more effectively

## Making Oslo more responsive

Just like any responsible city government, the Municipality of Oslo exists to serve the interests of its citizens. In order to make their lives better and support their interests, the local government needed to be able to more effectively process and respond to citizen requests. But while the city has made significant efforts to update its approach and provide a satisfying outlet for its residents, digital technology has raised expectations substantially, which has resulted in an even greater need for innovation.

As a part of its Program for Innovation, the Municipality of Oslo wanted to investigate the potential for implementing chatbot technology for both internal self-service and for various citizen service centers. In addition, the city wanted to integrate robotic process automation (RPA) capabilities into these chatbots, requiring a thorough understanding of the differences between the various leading platforms. Because of the significant ambition of this effort and the technological expertise required, the municipality partnered with Capgemini for the duration of the project.

## Overview

**Client:** The Municipality of Oslo

**Region:** Norway

**Sector:** Public Sector

### Client Challenge:

The Municipality wanted to explore opportunities to better manage the processing of citizen and employee queries and standardize its approach across all locations

### Solution:

Together with Capgemini, the Municipality of Oslo developed a chatbot proof of concept with integrated RPA capabilities to respond to citizen requests and internal queries more quickly and reliably

### Benefits:

- Standardization across all locations
- Faster response time
- Greater cost-effectiveness





## Developing chatbot solutions

Working collaboratively, Oslo and Capgemini created an interdisciplinary team to develop proof of concept solutions. Beginning with the internal automated chatbot interface, the team tested the solution by having the municipality employees ask the robot to confirm their employment via chat. If successful, the request triggered the generation of a confirmation document through an existing automated process and then delivered final confirmation in the chat window as soon as resources were available.

With the internal chatbot providing the initial impetus for the rest of the project, the team then expanded the test to include the use of voice assistants and assess chatbot technology from different vendors. This testing also enabled the partners to firmly establish the distinction between "actionbots" and "infobots" and the variations within the latter category.

Once Oslo and Capgemini had established the necessary foundation of knowledge, the solution was created in the cloud and integrated with the established RPA environment, as well as with third-party suppliers of chatbot services and cognitive tools. The solution was built serverless, making it easy to scale and eliminating costs when it is not used.

Because the architecture follows the principles of micro-services, technical components can easily be added, changed, and removed independent from other components. By applying the same principle to support the connection of third-party solutions such as the UiPath RPA Orchestrator and chatbot services, Oslo and Capgemini ensured that these services can be further developed without the need for configurations in other sections.

Finally, the project team developed a comprehensive training plan to share their expertise through both theoretical and practical exercises with participants from all departments within the Municipality.

## Better responsiveness for the present and future

With these solutions, request processing can be standardized across every employee location within the municipality. By integrating the technical solution with the municipality's existing platforms for all employees, it was possible to automatically recognize which user was calling in and then ensure that the right information was given to the right person.

Two response versions were created to respond to requests depending on whether it is a user or an automated process that initiates the search for information. Two additional information chatbot versions were created in order to respond to requests involving specific domains while others obtained information from a central knowledge base. When replying to internal and external requests, the solution is capable of managing both manually written user responses as well as queries that are forwarded to IBM Watson Explorer to search the entirety of the municipality's web sites.

In order to explore additional opportunities for chatbot technology within the municipality, the partners reviewed a voice assistant in order to expand the existing test that confirmed employment at the municipality. As a result, a great deal of reusability between a chatbot and a voice assistant was detected, although individual adjustments still need to be made in order to interpret oral input, which is typically less structured than written input.

Following the development of this chatbot proof of concept, the Municipality of Oslo and Capgemini identified several new opportunities for RPA and chatbot technology, as well as new ways to use both to complement the solution and create added value. Thanks to collaboration and user involvement, the partners now plan to find even more innovative and future-oriented services to deliver through new user interfaces.



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