

# WienBot

## AI counters Covid-19 disinformation

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During the COVID 19 pandemic the WienBot became an even more important information channel for crisis communication. By using artificial intelligence and interfaces to public, central data sources, continuously updated and verified information could be guaranteed.

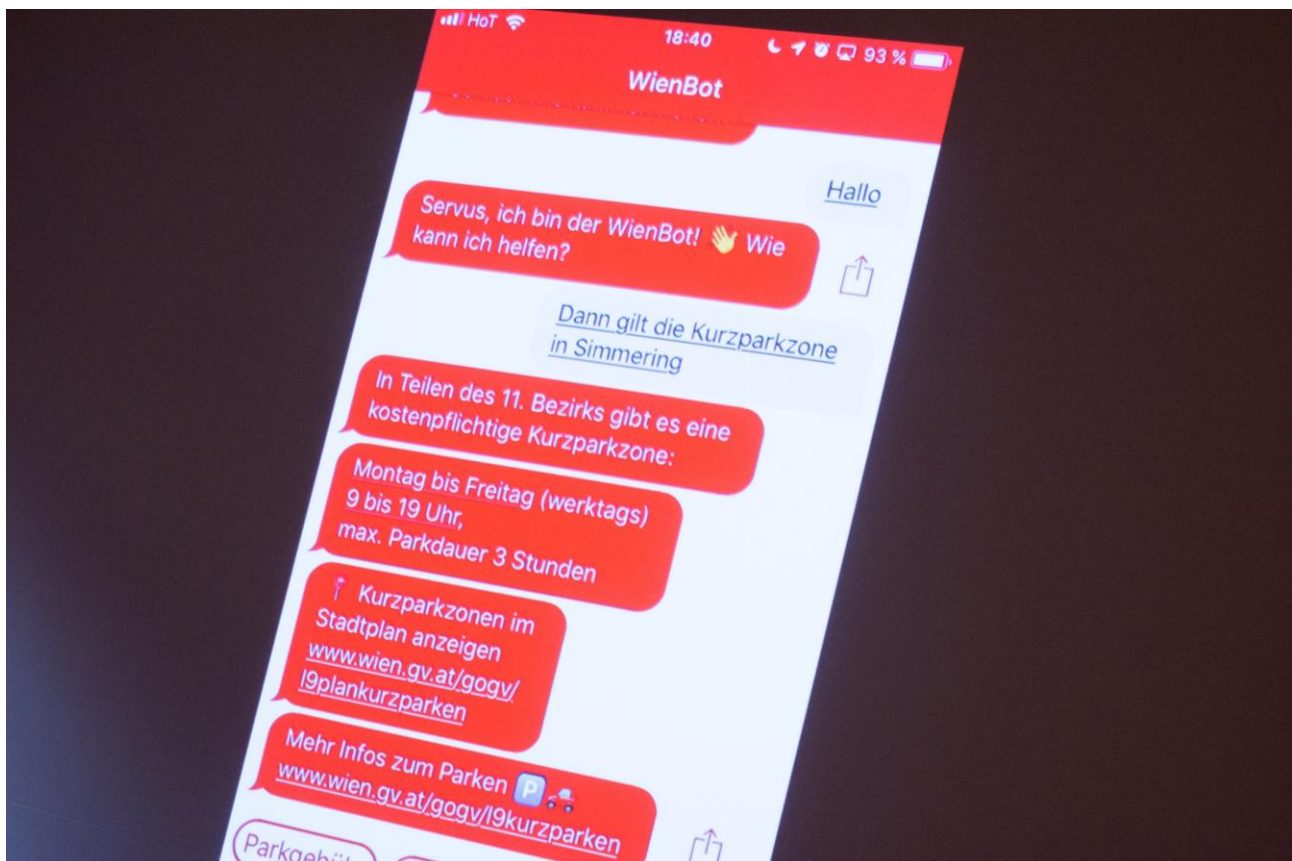


Fig. 1. The WienBot answers natural language questions of the users, providing them with relevant information. © Presseinformationsdienst der Stadt Wien (PID)/Votava Martin.

## A ChatBot for crisis communication

Particularly in times of crisis, there is an increased need for information among the population. Public services experienced a particular stress test with the beginning of the Covid-19 pandemic. They

faced the challenge of coordinating and communicating daily Covid-19 updates on protective measures and instructions to the citizens.

In order to relieve the burden on call centres and health advice services and to provide citizens with targeted and quick answers to their questions, the City of Vienna used its digital assistant “WienBot” to set up a “CoronaBot” at the beginning of the corona crisis. Within a few days, citizens were able to access relevant information about Covid-19 via the digital assistant. In the following weeks, WienBot was continuously expanded with current information, trained and improved by the questions asked. The plan was to guide citizens through times of crisis on a channel they already trusted, and to ease the burden on call centres. This plan worked out perfectly: The City of Vienna’s digital assistant has answered more than two million questions on Covid-19 since the beginning of the corona crisis.

In 2017, Vienna was the first city in the world that launched its own intelligent voice assistant. With its development, the City of Vienna did not only respond to a digital trend. By harnessing technical innovation and placing citizens’ needs at the centre of communication, WienBot supports Vienna’s Smart City strategy, which literally calls for “high quality of life for everyone in Vienna through social and technical innovation in all areas, while maximising conservation of resources.”

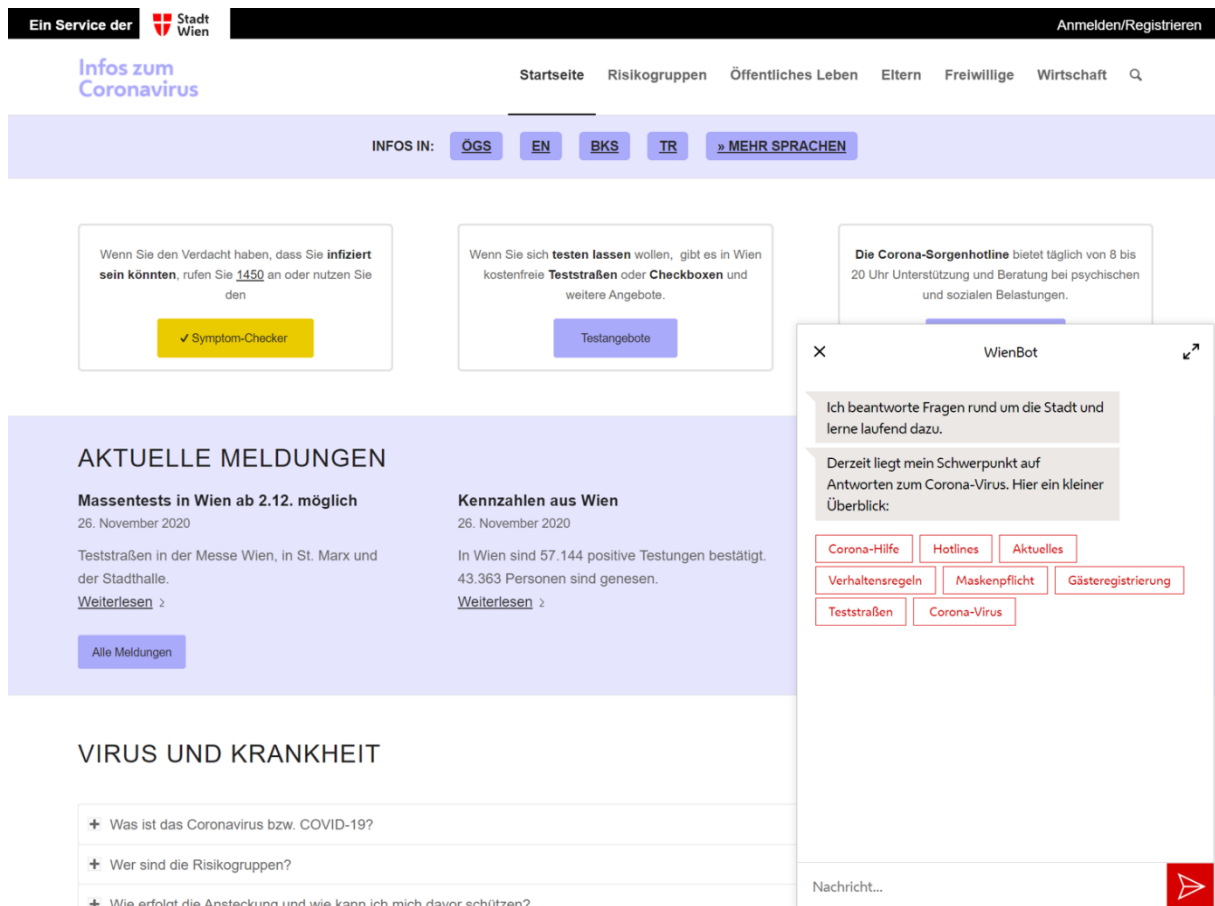


Fig. 2. The information homepage of the City of Vienna concerning the coronavirus-pandemic also included the WienBot to allow interactive questions by the users. © PID.

Since the launch of WienBot, citizens have enjoyed using the channel and are constantly involved in its further development e.g. by asking questions on relevant topics. As a result, the digital assistant is in a constant process of learning and expanding its knowledge. Furthermore, citizens are already

familiar with the channel as a trustworthy source of information, which is extremely beneficial during a crisis. As a mass communication channel during the crisis, WienBot fully played its strengths by using artificial intelligence and the integration of trusted public data sources.

### **WienBot becomes “CoronaBot”**

Especially at the beginning of the pandemic uncertainty, fear and lack of clarity were widespread among citizens. Most of them had never experienced a crisis like this before. Therefore, it was crucial for the City Administration to provide orientation and to be a reliable source of information to large parts of the population.

This is exactly where the digital assistant WienBot came in as an essential resource. During the Covid-19 lockdowns in particular, the digital assistant allowed the City of Vienna to directly reach out to the population via their trusted channel, answering their most urgent questions, helping prevent misinformation, and guiding citizens through times of crisis.

For this purpose, WienBot was trained with several thousand questions and technical terms on the topic of corona. The biggest effort was to prepare the complex topic in a short and simple way. In addition, all effects of the lockdown had to be incorporated into already existing answers within a very short time. Current information (e.g. from expert sources like AGES, the Austrian Health and Food Safety Agency) was continuously updated via interfaces to public databases, and the answers were automatically prioritised according to relevance and urgency.

At the same time, the questions asked by users were an excellent basis for identifying topics on which the local population needed more information. Providing continuously updated information, the bot also relieved the burden on the municipal health services.

Turning WienBot into a CoronaBot so quickly was only possible due to the close and good cooperation of various departments of the Vienna City Administration. Two municipal departments, the Press and Information Services (MA53) and the Information Technology Department (MA01), provided the editorial and technical basis for integrating Covid-19 information into WienBot. Intensive cooperation with the Public Health Office and its medical officers ensured that only checked and reliable medical information was offered to the population. During the entire process, everyone involved in the CoronaBot project kept in mind accessibility requirements and provided information in simple language.

### **Answering frequently asked questions faster than Google**

The strengths of automated communication could thus be fully exploited: WienBot became known for answering questions on restricted opening hours, current guidelines, protective measures or Corona aid measures “faster than Google” because the bot provides short, precise answers rather than a list of links. With each new question, WienBot learned independently, saving time in the search for the right answer and at the same time relieving the limited resources of public health services and hotlines.

As a part of a comprehensive campaign by the City of Vienna, WienBot was placed as an interactive banner in leading Austrian online media like *orf.at* (the news website of the Austrian public service

broadcaster ORF) and *derstandard.at* (daily newspaper) (Fig. 3). The fully functional widget answered questions on corona or the current situation in Vienna's public swimming pools. The latter topic was not a random choice because the relevant provisions in the Covid-19 regulations advised the population to inform themselves online about free capacities before setting out to a public pool.

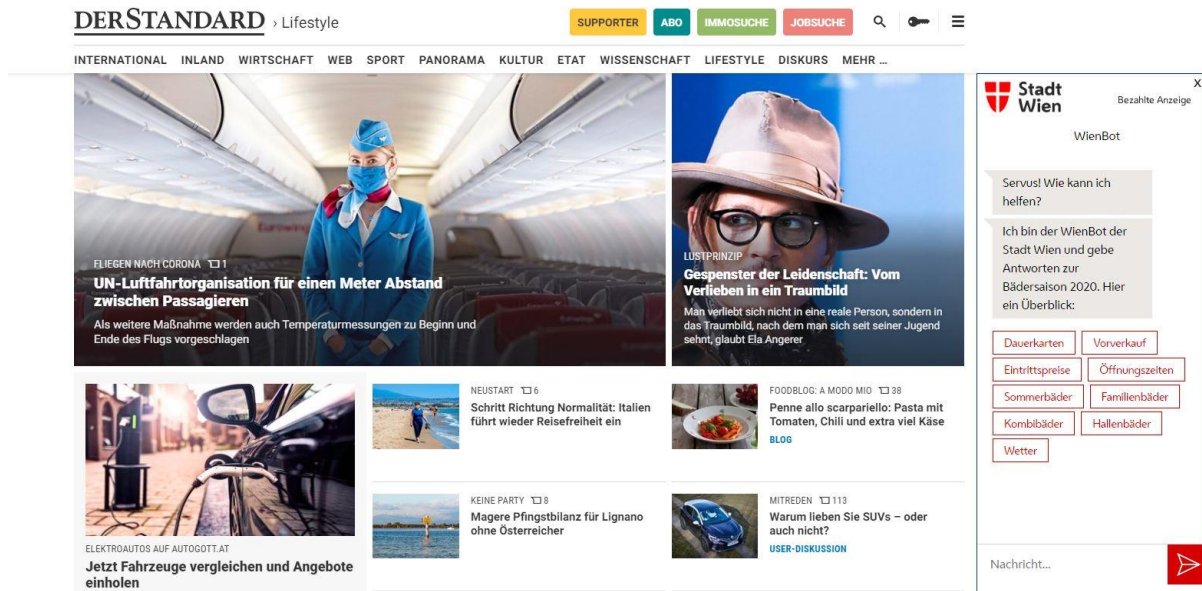


Fig. 3. To increase outreach, WienBot was placed as an interactive banner in leading Austrian online media outlets. © PID.

## Impact

Since its launch, WienBot has focused on the needs of local citizens, who are actively involved in the ongoing AI learning process via the questions they ask. Artificial intelligence analyses these new questions, and editorial review processes guarantee that WienBot constantly learns and expands its knowledge. Because of its valuable user feedback, WienBot is now a central communication channel of the City of Vienna. It is integrated in:

- the City of Vienna app (Search)
- [wien.gv.at](https://wien.gv.at)-search (direct response above the search results)
- [coronavirus.wien.gv.at](https://coronavirus.wien.gv.at) (web widget)
- [impfservice.wien](https://impfservice.wien) (web widget)
- [allesgurgelt.at](https://allesgurgelt.at) (web widget)
- [gesundheitsverbund.at](https://gesundheitsverbund.at) (web widget)
- Knowledge management of Vienna's Community Service (interface)

This is also reflected in the rapidly increasing number of questions, as seen in Figure 4. Since the start of the Corona pandemic, WienBot has already provided 2,000,000 answers on this specific topic. This has significantly supported citizens and relieved the burden on hotlines. Currently, people submit about 500,000 questions to WienBot every month. An average 60% of all answers are related to the coronavirus or Covid-19.

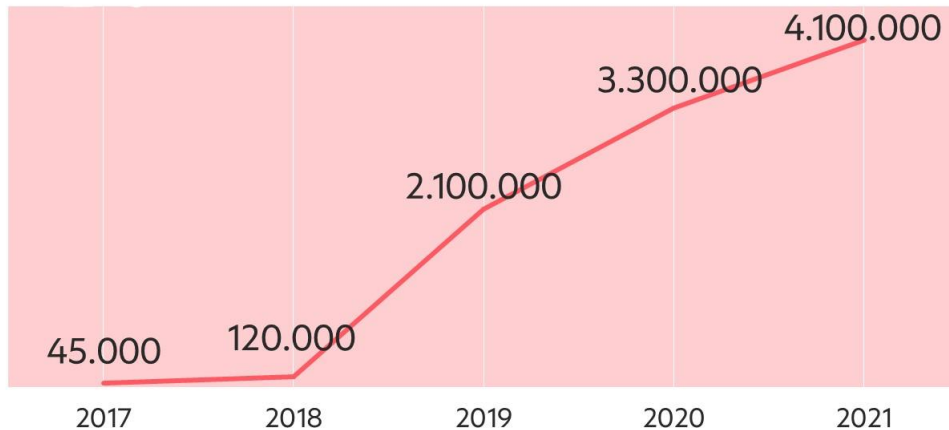


Fig. 4. The increasing number of questions issued to the WienBot by the users reflect the growing importance of the WienBot as a communication channel of the City of Vienna. © PID.

## Cooperation

The team behind WienBot has showcased its talent several times to delegates from other Austrian cities. It has provided an exceptional case study demonstrating how valuable a digital assistant can be for a public institution. This quickly led to the development of a network in Austria. Cities like Graz and Linz as well as the Austrian Association of Cities are in constant exchange with the WienBot team. The team's experience is also very much appreciated across national borders: the WienBot creators have been invited to give lectures in Germany and have maintained an active exchange with the cities of Berlin and Munich as well as the German Ministry of the Interior. The ongoing exchange also helps to continuously improve the service and incorporate new and fresh ideas.

## Lessons learned

The most important lessons that the team has learned about the digital assistant are

### User first-approach:

With their questions, the users train WienBot and are thus continuously involved in the process, letting the City of Vienna know which answers are needed most urgently and which topics need to be expanded.

### Content first-approach:

Questions and answers by WienBot are prepared specifically for the digital assistant; they need to be short and easily understandable for the citizens. Therefore, simply copying and pasting existing text does not suffice to meet the specific needs of WienBot users.

### Voice first-approach:

The accessibility of WienBot is one of its core characteristics, especially thanks to its great natural language support. Besides chatting with WienBot, users can ask WienBot questions – even in Viennese dialect. Voice input is important for persons with special needs, but users' interactions with technology are generally changing. A few years ago, written words were the most widely used input method, speech is currently on the fast lane. Based on its own experience, the WienBot team recommends not to think too much in formulated and written sentences but way more in spoken language.