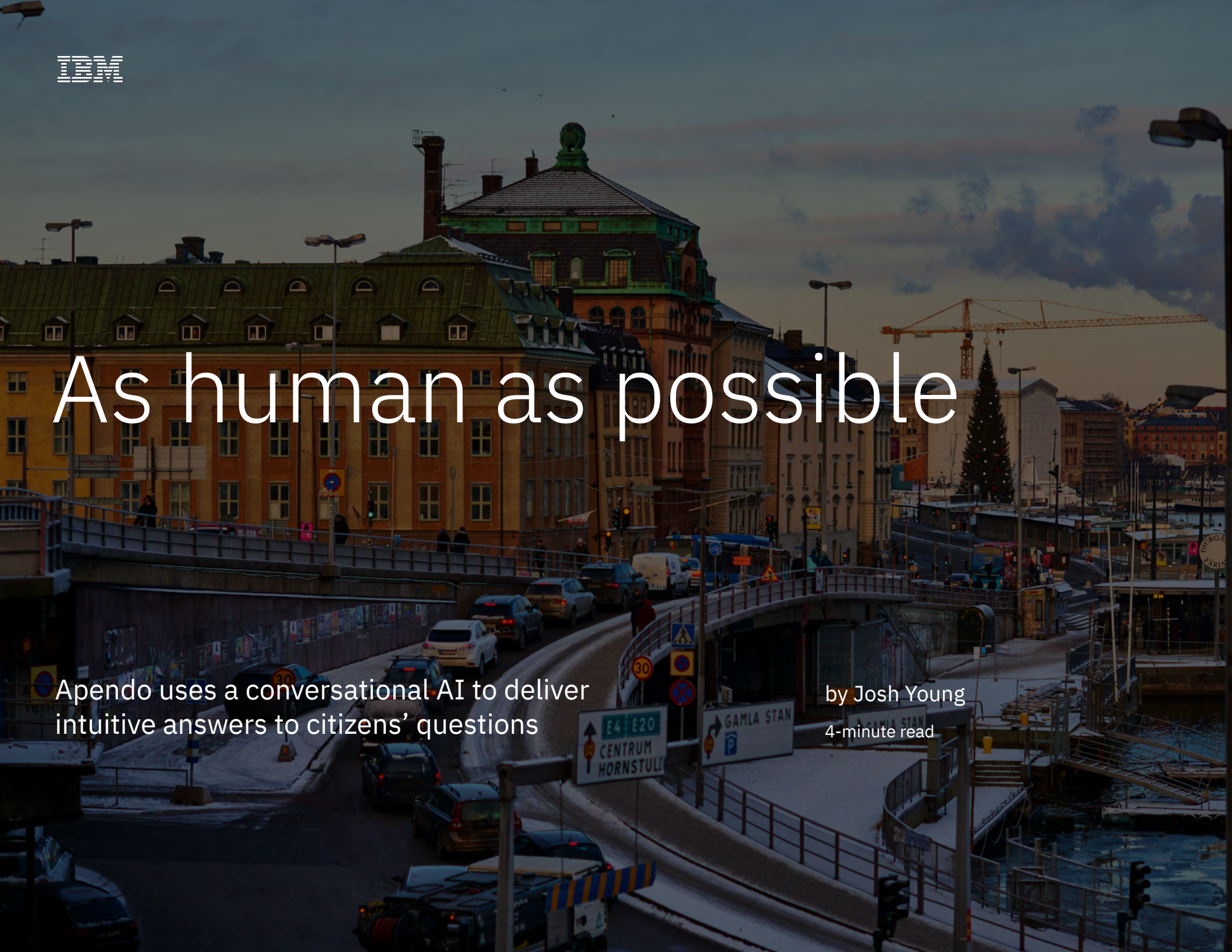IBM

As human as possible

Apendo uses a conversational AI to deliver
intuitive answers to citizens' questions

by Josh Young

4-minute read

Less economic activity means less tax revenue. And with the impact of the COVID-19 pandemic still stifling business, many smaller municipalities in Sweden were facing budget crises as they needed to continue delivering support to citizens with less funds at hand. At the same time, the social and economic impact of the pandemic has also increased the number citizens now relying on local welfare systems.

"Many of these municipalities are out in rural areas," notes Johan Ekberg, Chief

Executive Officer at IBM Business Partner Apendo AB. "Their populations are older, so their tax revenues were already shrinking before 2020, and COVID-19 has only made it more painful for them."

Conversely, citizen expectations regarding the speed and efficiency of government services have only increased in the current digital age. And while adding staff may have been an option available in the past to deal with

increasing workloads, these cities and towns now needed a strategy that could more efficiently interface with and deliver services to their citizens.

This challenge is what motivated Apendo to create a solution that could efficiently deliver digital-assisted citizen services. Rather than contacting a local call center or government office, residents would be able to request information or report issues via an intuitive virtual assistant that could be accessed through their smartphone or on the web without human interaction.

"In Sweden we have over 290 municipalities," explains Ekberg. "And only a handful use any kind of a chatbot for citizens. It's a huge market, and a perfect solution for balancing budget and service."

The Apendo Digital Assistant was trained to recognize over

550,000

Swedish words

Apendo estimates that the average installation should free up at least

1

full-time equivalent (FTE)

Smarter than your average virtual assistant

To make its Apendo Digital Assistant (ADA) for Municipalities a reality, the business coordinated with IBM, building the solution with IBM Watson® and IBM Cloud Pak® technology and delivering it through an IBM Embedded Solution Agreement (ESA).

"Our first step was actually to develop the Swedish language support in Watson Discovery," recalls Ekberg. "We trained it with over 550,000 Swedish words. It's not translating, it really knows the Swedish language. That makes its answers and understanding much more intuitive."

Now, municipal governments can offload various functions to the virtual assistant, allowing the AI-driven tool to respond to citizen requests automatically. For example, as COVID-related questions continue to flood contact centers, cities can train ADA to offer answers to common questions like, where can I get tested? Or, how do I get a vaccine dose?

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Johan Ekberg, Chief Executive Officer, IBM Business Partner Apendo AB

ADA can also be integrated directly into reporting and scheduling processes for maintenance services. "Let's say you're going for a walk in the winter," explains Ekberg. "And you see no one has taken away the snow. You can take a photo of the mess on the street and submit it through your phone. Then ADA will use image recognition to classify the problem and schedule removal. You can do the same thing with any other messes, like potholes. The assistant will take the report and add it to the work list."

He continues: "If you're using your phone, you don't even need to know where you are. Our solution will add your location data to the uploaded image."

ADA relies on IBM Watson Assistant technology to provide the conversational AI, while IBM Watson Discovery delivers expanded AI and search capabilities. "You can have a regular chatbot, and

that can only answer what it's trained for," adds Ekberg. "But we created ADA to operate as close to human behavior as possible. Just like when you personally don't know an answer, you go read something—if ADA can't answer with its existing training, IBM Watson Discovery will search any attached libraries and give the best or most frequent answer it can find. And if that answer is in a 100-page document, ADA will take you to the exact page and highlight the exact phrase."

ADA also uses IBM Cloud Pak for Data System for its underlying data and AI platform. Due to broader regulations, these Swedish municipalities need to keep all data within national borders, and this particular IBM technology is designed to deliver the advantages of hybrid cloud within an on-premise environment.

Smarter conversations make happier citizens

By automating common interactions, users of ADA will be able to cut related citizen support costs without compromising service quality.

"We anticipate that mid-size municipalities should be able to save the equivalent of at least one full-time employee," notes Ekberg. "And for one of the installations that we already have running, we project that municipality will reduce their incoming calls by 20% after the first two years. But it takes time to educate and shift the citizens to use the new ADA service."

Beyond the efficiency increases, ADA also helps to improve the quality and

timeliness of support, leading to more positive interactions with citizens. "Instead of 8 - 5 o'clock service, they now have 24x7 service," adds Ekberg. "If they have a question on a weekend, they can get it answered

then. They don't need to wait until Monday morning."

And with ADA beginning to penetrate the market, Apendo is pleased with its choice of IBM Watson and IBM Cloud

Pak technology. "Robust, scalable, state of the art—that's kind of the IBM platform," continues Ekberg. "If I was a customer, and I was looking to buy a digital assistant, I would want a technology that was going to be around for a long time. You don't want to spend time training a platform that will be gone in two years. You want something reliable. And we've used the IBM brand to instill that trust."

Of course, Apendo finds value in its partnership with IBM beyond access to innovative technology. "We needed an easy way for municipalities to understand the cost," explains Ekberg. "And by using an ESA we were able to disrupt the usual way of pricing these services. We invented a new consumption-based pricing model where users pay per citizen and per employee. Without the ESA and this new model, we wouldn't have ADA.

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With Watson™

About Apendo AB

Founded in 1991, IBM Business Partner Apendo (external link) aids customers on their digital journey, specializing in business process management, machine learning and enterprise content management solutions. The organization is headquartered in Stockholm, Sweden, with additional offices in Denmark.

Solution components

- IBM Cloud Pak® for Data System
- IBM Watson® Assistant
- IBM Watson Discovery

About With Watson®

The With Watson Program is a global customer success program providing exclusive brand, marketing and enablement resources to organizations that are embedding Watson technologies into their offerings.

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