

# Healthcare Advisory Bot

CONVERSATIONAL ASSISTANTS AS A SOURCE OF KNOWLEDGE TO SUPPORT HEALTH EXPERTS IN INDIA



Alexa is Amazon's Voice Service and it is accessed through Amazon Echo. As a conversational assistant, Alexa helps with things like music playback, making to-do lists, setting alarms, streaming podcasts, playing audiobooks, as well as providing weather, traffic and other real-time information.

Users are able to extend Alexa's capabilities by installing "skills", which are additional functionalities developed by third-party vendors. Alexa skills are similar to apps and can be enabled and disabled using the Alexa app or a web browser. Skills are voice-driven Alexa capabilities. You can add Alexa skills to your Echo to bring products and services to life.

## Background

The client is a science-led global healthcare company with three global businesses that research, develop and manufacture innovative pharmaceutical medicines, vaccines and consumer healthcare products. With offices around the world and several legacy products listed in the World Health Organization's List of Essential Medicines, the client therefore represents one of the largest pharmaceutical companies and industrial network of vaccines worldwide.

In the context of a study run by SERMO Inc. the client detected the need for Obstetricians, Gynaecologists and Paediatricians in India to share expertise across Health Care Professional (HCP) specializations and to access information on new treatments and products. Based on an initial market survey, the client decided that India is the ideal market for piloting a virtual assistant project on the topic of vaccination during pregnancy.

## The Challenge

As the results of the conducted study showed that Indian HCPs are already educating themselves using virtual assistants, the client's innovation department wanted to come up with an innovative solution that builds upon the existing knowledge and user behaviour in the Indian market. Providing the users with a specific and accurate content from a trusted source – content proven by doctors - shall help improve the Indian HCPs understanding of the value of maternal immunization. To link that idea with the use of the latest technology in the field of virtual assistants the client decided to work on a pilot version together with Sopra Steria's experts.

## The Solution

Sopra Steria leveraged the power of virtual assistants to increase the self-education of Indian HCPs. In close collaboration with Sopra Steria's colleagues from Belgium, India and France the project team developed an Alexa Skill usable on Amazon Alexa Powered Device and Amazon Alexa Mobile App (Android, iOS). Based on a carefully defined list of Q&A – where "Questions" have been identified by the client for the specific frame of the project with regard to market and audience and "Answers" have been confirmed by doctors in India – Sopra Steria developed an Alexa Skill that answers questions about maternal immunization.

"This project represents the successful example of a business case that we formed together with our client resulting from discussions in the context of our Sopra Steria Digital Breakfast event. Developing the pilot for an "Alexa Skill" in the healthcare sector allowed us to couple the idea of awareness creation on the importance of maternal immunization for the Indian market with Sopra Steria's offering of technical expertise on Virtual Assistants. It was a great experience accompanying our client in this challenge together with a strong international team!"

**Lisa BODZENTA**  
Senior Consultant  
Sopra Steria Belgium

"A Cloud Based Virtual Assistant is the future of Artificial Intelligence / Machine Learning. This project provided us the opportunity to work on the "Alexa Virtual Assistant" especially by utilizing the most recent Serverless AWS Cloud Platform, which was additionally the main endeavored innovative use case in Sopra Steria India's Digital Team. Happy to work on such an innovative product and particularly for a client in the healthcare domain."

**Sanjay HUMANEKER**  
Project Lead - Development  
Sopra Steria India

## The Solution

Throughout the project phases "Scope-Design-Develop-Train" Sopra Steria applied an agile approach that included co-design workshops implying the project stakeholders from Belgium, India and France. To bring the idea to life and to provide the client with a pilot version of a Virtual Assistant, the following support has been given:

- Understanding of functional and technical framework for the implementation of the Virtual Assistant
- Training for the business on technical concepts (intents/utterances/slots)
- Definition of positioning, tone, personality of the Virtual Assistant
- Identification of intents, utterances, slots based on the list of Q&A
- Technical implementation of defined criteria = development of Alexa Skill
- Training and adaptation of Alexa Skill in line with feedback from client and exchange during workshops
- Technical support from Sopra Steria's AI experts throughout the entire project
- Project management support to guarantee coordination and alignment between multiple international stakeholders

## The Results

In close collaboration with the client's innovation team, Sopra Steria's consultants and technical experts developed the pilot version of the Alexa Skill on maternal immunization. The Alexa Skill provides information concerning vaccination during pregnancy and performs the tasks compliant to the predefined FAQ, utterances for each FAQ, invocation, passcode identification for certified user, disambiguation question, small talk & unrelated conversations, product key safety information, feedback option and dialogue closure.

The Alexa Skill presents the following benefits:

- **Introduction of a new communication channel** that facilitates the work of Obstetricians, Gynaecologists and Paediatricians in India
- Support for Indian Healthcare Professionals to **access accurate and medically proven information** on treatments and products
- **Awareness creation and knowledge sharing between experts** about maternal vaccination and the related vaccines available in the market
- **Possibility to extend** - within the given safety regulations - the Alexa Skill or develop further Skills for different or new subjects relevant to HCPs
- **Opportunity to connect with stakeholders** on trends in the healthcare sector and exchange on latest (research) topics that facilitate engagement
- **Contribution to the client's activities** as defined in their innovation roadmap to leverage latest technologies

## About Sopra Steria

Sopra Steria, European leader of digital transformation, proposes one of the most complete end-to-end solution offerings available on the market: consultancy, systems integration, software development, infrastructure management and business process services. Public and private leading companies in the field rely on Sopra Steria to for the delivery of successful digital transformation projects aimed to the most complex and critical challenges of their business. By combining high value innovation, added value and performing services, Sopra Steria allows its customers to make the best use of digital technologies.

+50 years of experience

• Over 46 000 employees

• 25 countries

• 4,4 € billion revenue in 2019