

## **Business Systems PhD Research Topic**

### *Toward a Deep Understanding of Chatbot in Business Processes*

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Organizations have increasingly invested in artificial intelligence (AI) in general and chatbots in particular. AI represents great opportunities for organizations to enhance their performance by improving work design and business operations. For example, AI has provided great opportunities for companies to address challenges raised in today's rapidly changing marketplace. Chatbots supported by AI have received increasing responsibility to provide effective customer communication. These chatbots can process a large amount of data and train themselves to interact with customers.

The term chatbots refers to conversational agents that "leverage natural language processing to engage in conversations with human users" (Schuetzler et al., 2020, p. 875). Chatbots have brought various benefits, such as high-quality communication, improved response times, and stable 24/7 assistance. Thus, chatbots can greatly enhance productivity. Chatbots can automate everyday business work and analyze data to reach insightful conclusions. In the context of customer service, chatbots help to establish initial contact with customers and provide post-purchase services by automatically initiating conversations about use experiences and future needs. Chatbots can also automate online purchases and maintain outstanding responsiveness to customer inquiries. By integrating chatbots into their business processes, organizations could establish an innovative channel for communication with customers and resolution of complaints in addition to handling demands in a timely fashion.

Given that chatbots rely on algorithms, such as natural language processing, to train themselves, they can also generate new knowledge from data. For example, as chatbots are trained based on previous conversations with customers, new insights and knowledge can be generated to help understand customers and their needs, acquire new customers, and optimize pricing. They can generate new knowledge as they source answers from internal systems and external trusted third-party sites. Chatbots enable effective knowledge exchange not only external to but also within organizational networks. Chatbots also affect employees' lives outside of the workplace. For example, because chatbots can interact with customers and provide answers to common questions 24/7, they can reduce employees' work overload and free employees from working late into the night or during the weekend, thus enhancing their work-life balance.

This project aims to examine how chatbot impact business from the perspective of either customers or employees. The project can use surveys, interviews, or the mixed method. Some possible research questions include:

1. What are the (un)intended consequences of implementing chatbots in business? These consequences can include business, social, and ethical consequences.
2. How can business leverage chatbots to deal with dynamic market and changing society?
3. What are ethical issues related to chatbots? And how can we deal with them?
4. What are relevant affordances of chatbots to support business and interact with customers?

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