

Roadmap for AI in a Humane ICU

ICU is the place with the most advanced monitoring and support machines in a hospital. But surrounded by all these machines, ICU patients are also like machines instead of humans. Scientific advances have been proved to greatly improve the cure rate. Meanwhile, patients' well-being has been gradually treated as important as curing the disease itself. With the trend of human-centered intensive care, new services are required to better satisfy patients' needs.

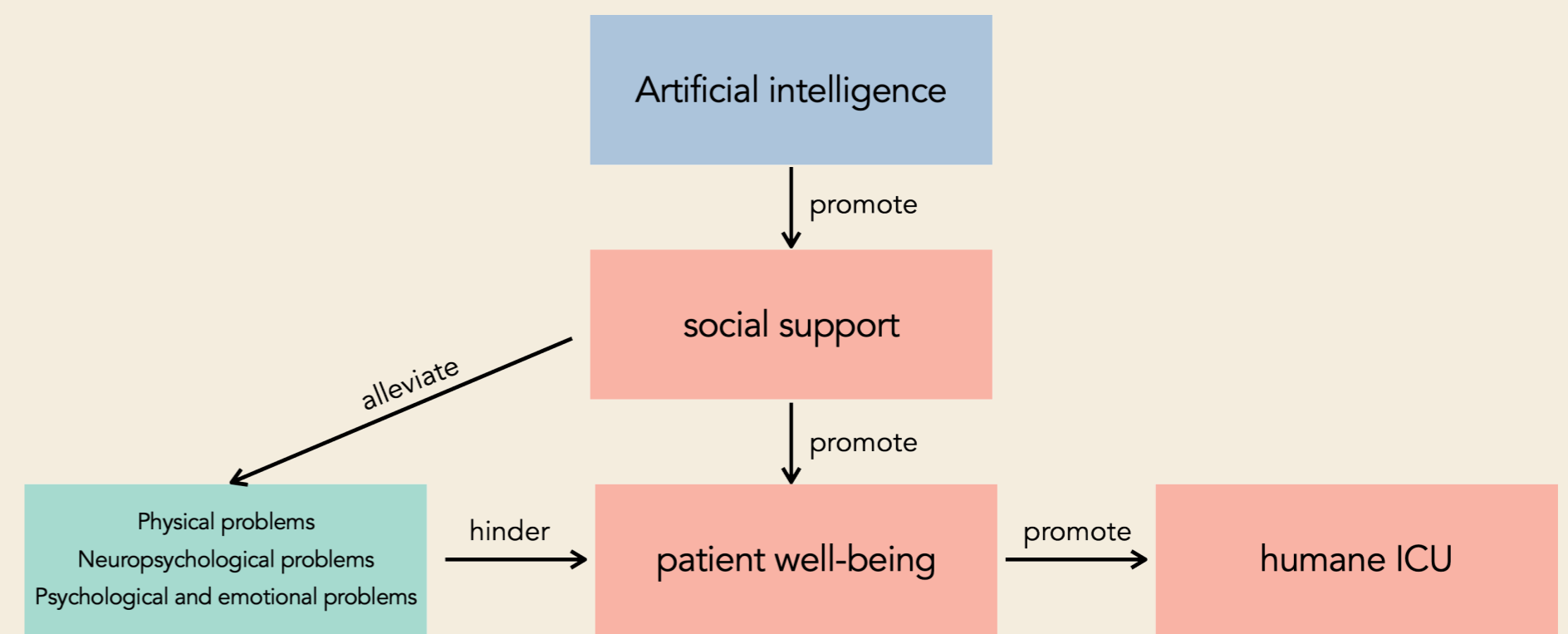


Figure 1. Design Goal

Artificial intelligence can be a strong force to improve the quality of care in ICU. Apart from taking advantage of the existing monitoring data and EHR data to improve the cure rate, A.I. also has great potential to promote social support for ICU patients.

The purpose of this project is to design a roadmap for A.I. to provide social support for ICU patients, in order to improve the patient wellbeing and contribute to a humane ICU.

The design solution is an application called Cricare that includes nine services: 1. Orientation; 2. Autocomplete; 3. Voice Simulator; 4. Music Creator; 5. Environment adjuster; 6. Chatbot; 7. Virtual Psychologist; 8. Peer support; 9. Goal setter. A questionnaire evaluation with nurses was conducted and the results show Cricare is the potential to contribute to a humane ICU. After feasibility evaluation, a primary roadmap was created to develop Cricare.

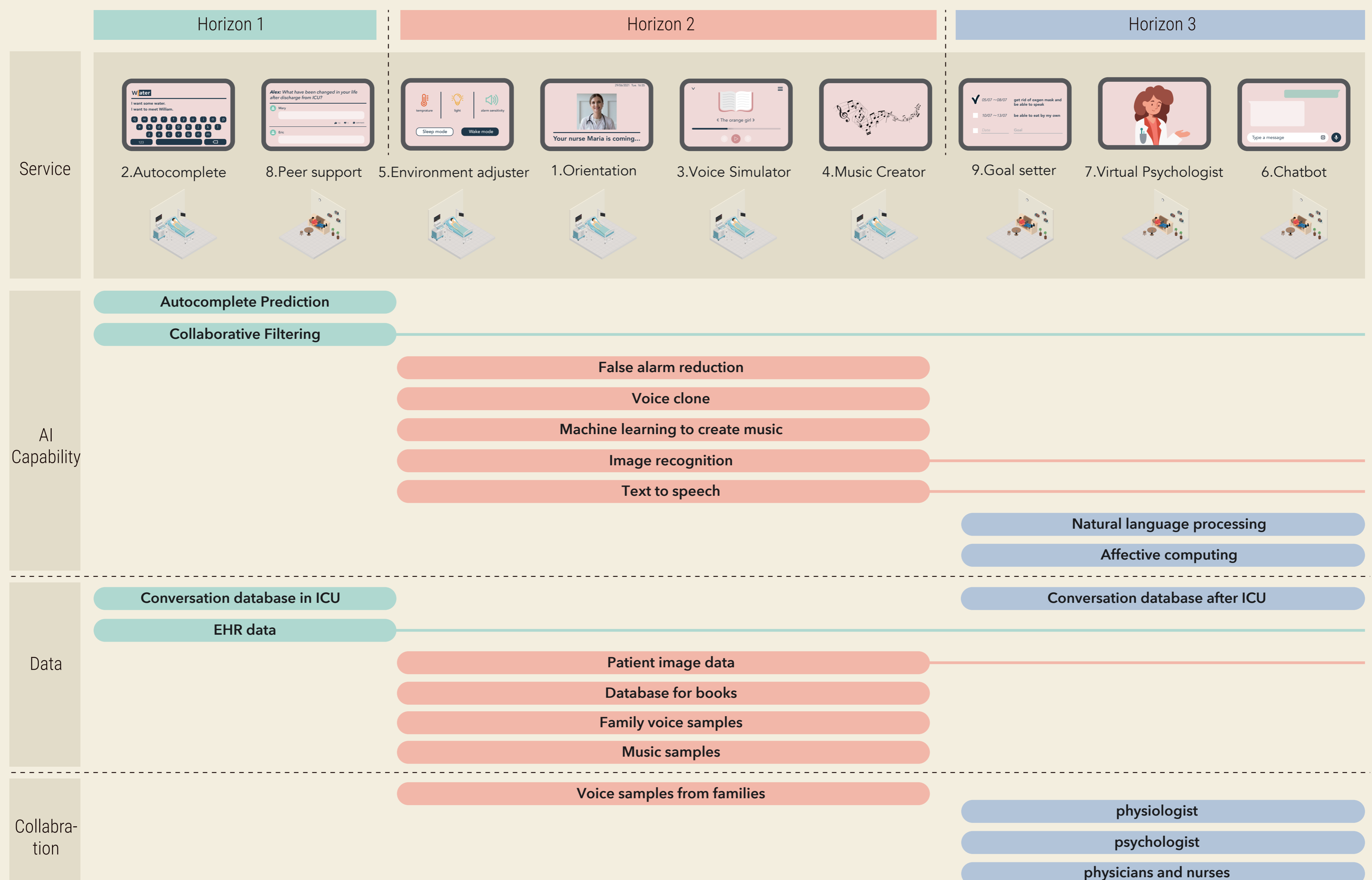


Figure 2. Roadmap for AI to provide social support in a humane ICU