

Developing and Testing an AI Empathy Agent

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Background & Vision

- We are developing an always-on, easy-to-use Empathy Agent (EA) to deliver peer-support in a digital arena.
- Currently, there are no online, automatic systems available like this; the increasingly ubiquitous chatbot technology are mostly based on pre-written scripts.
- The Empathy Agent (EA) will deliver tailored feedback sourced from the response bank to provide support and improve the well-being of each service user (SU).
- The EA will deliver an intelligent personalised human-centred mental health advisor that provides empathetic, personalised advice.
- The EA will be the 'voice of the Peer Support Community', co-developed between SUs and the research team.

Generation and Rating of the EA Response Bank

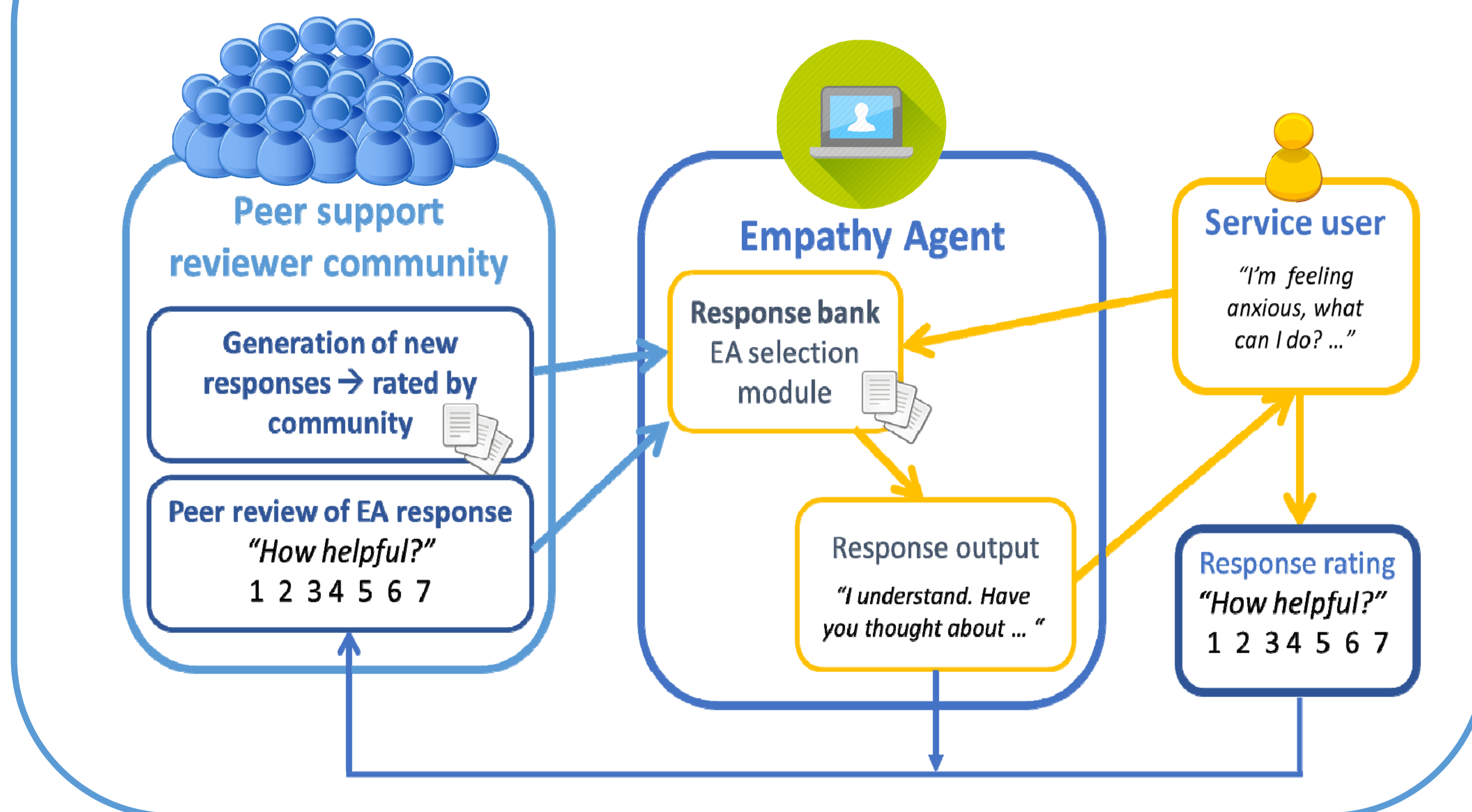
- Response bank generated by service users via online survey presenting 5 different SU scenarios;
- Responses then screened for duplicates and usability by research team and rated by service users via online survey;
- Responses then rated by SUs via online survey to generate ratings to be used in development of the AI underpinning the EA.

Response bank
Stage 1, Study 1: 184 participants with multiple responses = **686 responses**
Stage 2, Study 1: Rate responses on helpfulness, appropriateness

Developing EA Prototype

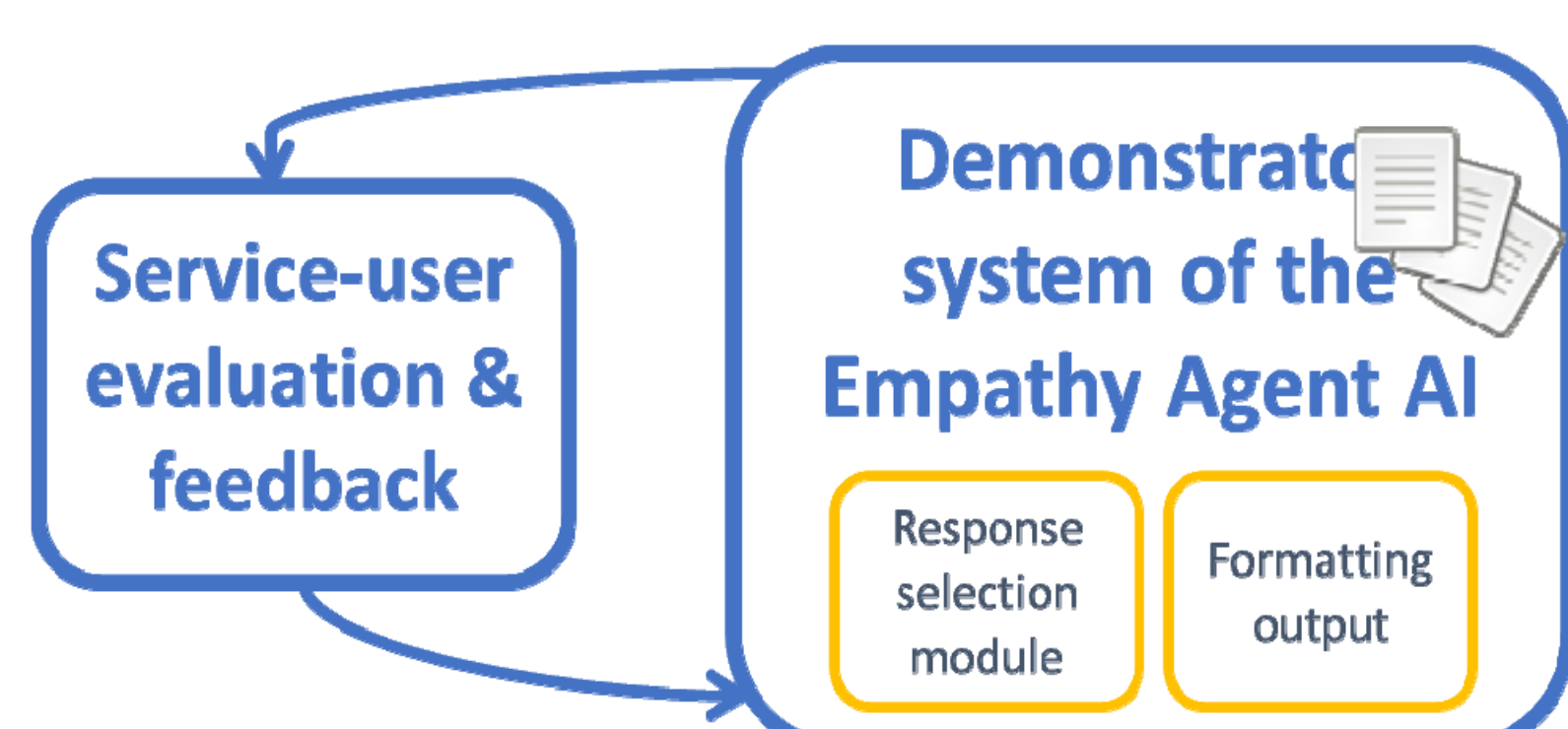
Response selection module Formatting output

Operational model of the Empathy Agent



Developing the Empathy Agent Prototype

- Use natural language processing techniques to discover underlying text-based patterns in highly rated responses;
- Use machine learning to train classifier to use identified patterns to predict rating of unseen responses;
- Investigate best automatic strategies for response selection 2nd cycle of SU-centred design conducted with 2 groups of SUs via in-person workshops;
- Look, feel and behaviour informed by service user feedback of the Empathy Agent.



Creating the Beginnings of a Peer Support Reviewer Community

- Develop a peer support community (PSC) drawn from existing SU networks and respondents to Stage 1 survey.
- PSC will participate in workshops and focus groups to inform ratings of peer support requests;
- The PSC's expertise and guidance regarding empathic peer support essential for designing and educating the EA.

