



## The WeNet Manifesto

# The Internet of Us: building virtual communities

Confronted by a challenge or a problem people may turn to their social circle, family, friends, and colleagues in the hope that someone will have the know-how to help. WeNet, the Internet of Us, is based on the proposition that with a larger and more diverse social circle, the more is it likely to include someone who is competent to address the issue. Furthermore, if the issue has multiple valid answers, for example “what’s the best book about hiking on the Alps?”, a large and diverse social circle may offer a range of suggestions including surprises: “I really recommend the Pyrenees”. Diversity may bring a fortunate stroke of serendipity.

A central aim of the WeNet study was to develop and release as open source a general, application agnostic platform designed to facilitate diversity-aware social interaction applications. And in parallel to create a data infrastructure comprising person-centric and behavioural data for use in empirical studies aimed at supporting new approaches to better understand and serve diverse communities.

WeNet’s platform harnesses diversity aware artificial intelligence to capitalize on the distributed competences and interests within a community, empowering social interactions beyond any one individual’s social circle. In this way the platform extends a person’s social circle to a community in the virtual world to the benefit of all.

One of the applications is an ‘ask for help’ platform developed and tested in three iterations each spanning several week pilot studies with students from [Aalborg University](#) (Denmark), [London School of Economics](#) (United Kingdom), [Jilin University](#) (China), [Amrita University](#) (India), [University of Trento](#) (Italy), [The National University of Mongolia](#) (Mongolia), the [Universidad Católica Nuestra Señora de la Asunción](#) (Paraguay), and the [Institute for Scientific and Technological Research of San Luis Potosi](#) (Mexico).



The pilot studies had two interlocking research foci. A diversity focus collected data about the students’ behaviors using mobile phone sensors and an application focus developed in vivo over three iterations with students. In the mapping of diversity users, personal profiles drew on social practice theory’s conceptual triumvirate; materiality - tangible assets; competences – skills and knowledge and meaning – values and beliefs. Measurement of these personal characteristics define each user as a point in a multi-dimensional space that formalizes the diversity of the community, allowing for algorithms to support the user submitting a question by selecting appropriate respondents.

A coding of the questions submitted in the pilot studies showed a wide range of topic including requests for recommendations and suggestions about recipes, books, places to visit, chatting and small talk, and academic competences. Exit surveys and focus groups with the student users showed that giving advice was marginally more satisfying than receiving it; that many users actively sought to capitalise on diversity, and that they appreciated the absence of photographs, commercial underpinnings and the opportunity to participate anonymously. Finally, being able to flag up a question as sensitive was welcomed and taken to reflect a positive ethic guiding the design.

In the development of the WeNet's platform and applications, members of the consortium investigated a number of questions of relevance to a diversity aware social media platform. These included:

- Testing whether phone sensor and app features reflect country-level diversity, whether such features can be used to infer like everyday life activities and exploring if a 'do-not-disturb' feature gives users a sense of better control.
- Assessing the effectiveness of non-monetary incentives (badges and personalised messages) to stimulate diversity and participation in WeNet applications using diversity aware AI based algorithms drawing upon users' personal profiles and preferences.
- Implementing socially-aware algorithms that learn the form and structure of social relations between users ensuring that the machine mediation happens in a manner grounded in the user's context, and not on any social stereotypes or biases that machine learning might inadvertently pick up from the learning data.
- Developing a model of communication between humans and machines based on declarative norms and rules of interaction. The model can both impose rules, for example ethical imperatives, and empower users to choose the norms that govern their own interactions.

The [WeNet eLearning Platform](#) was created as part of the Consortium's commitment to public outreach, offering online educational opportunities for researchers, students, developers, and other interested parties. Video lectures, supported by interactive materials, are grouped into courses that focus on different components of the WeNet Platform and the underlying research questions. Participants can receive a certificate on completion of the course.

The WeNet study was accompanied by ethics research that constantly reflected on the definitions, theoretical concepts, and algorithmic products in the WeNet model for a diversity-aware platform for social interaction. Messages reminded users of the importance of open, tolerant, and appreciative communication in interactions in a diverse community. The design recognised that when interactions involve sensitive issues, the questioners' identity should be protected. Privacy and data protection went beyond legal requirements with the study adopting a minimalist approach to collecting sensitive characteristics such as gender, sexuality, ethnicity, and disability.

In parallel to the WeNet pilot studies, the platform has been adopted by some of external third parties. One is the Spanish NGO [Fundación Cibervoluntarios](#), which coordinates a network of more than 1,800 cyber volunteers helping citizens with computers and their usage. Another is the Greek social cooperative enterprise [CommonsLab](#), which used WeNet technology to implement a chat application, MaTSE: a Matchmaking Tool for Social Entrepreneurs.

The WeNet consortium welcomes the opportunity to support non-profit community organisations in the adoption of our platform and the research community to consider our work as a jumping off point for further investigations into diversity in social relations.

[The WeNet Consortium](#), March 2023

