The objective of the project

To develop a compact, non-invasive, real-time sensor based on an ultrasonic piezoelectric transducer for the in-line measurement of density and viscosity of the polymers while circulating in a molten state inside the machine allowing the prediction of the polymer behaviour and the feedback to the process control.

Ultrasound institute

- is performing simulations on polymer processing, evaluating all scenarios as well as the behaviour of the ultrasound wave under these conditions;
- is developing an ultrasound transducer together with a waveguide suitable for starting measurements;
- is developing the algorithms necessary for density and viscosity calculations.

Project partners

Ibañez Extrusoras (Spain), Rhosonics Analytical (Netherlands), AK Industries (UK), Salvio Busquets (Spain), Multiplast Kunststoffverarbeitung GmbH (Germany), Centre de Recerca i Investigació de Catalunya (Spain), University of Bradford (UK), Kauno Technologijos Universitetas, Ultrasound Institute (Lithuania).

Project homepage: [http://www.polysense.eu/](http://www.polysense.eu/)