The main aim of the project is comprehensive analysis organic facies distribution in the Lower Paleozoic sediments in the SW part of the slope of the East European Platform, in Polish part of the Baltic basin. The organic facies distribution, the geochemical characteristics and quality changes in the frontier areas, where there is limited data, will be carried out based on the results of several laboratory methods, from sedimentological to the geochemical and petrographic studies of organic matter. The following results will be applied in the numerical modeling the spatial distribution of organic facies, which allows for quantitative prediction of appropriate defined organic facies, especially in areas with poor recognition or unrecognized. The model describes the geological processes that are responsible for the deposition and preservation of organic matter in the sedimentary basins and interaction between these processes. During modelling by testing different options of geological evolution it is possible to achieve wide spectrum of possible results (min. max. average, etc.).

Proposed type and scope of research as well as expected results was not covered by any previous studies in the Polish sedimentary basins. Only partially, some issue were studied related to hydrocarbon exploration. Hence, proposed project will provide new data, which allow for deeper understanding of the organic facies and their distribution in paleogeographic framework of the Baltic basin. Particular emphasis will be placed on both the identification of organic facies and their distribution, and environmental factors related to water chemistry, temperature, trophic conditions, climate, paleobathymetry and sea-level changes during the deposition of organic matter, and the basin evolution.

Proposed project allows to include this important scientific area into up-to-date organic facies studies in sedimentary basins.