We live in the period of civilization transformation, the essence of which is the reconstruction of the axiological model of life of people and communities. The nature and scope of these transformations is currently most dependent on the technological development. A particularly important determinant for the development of civilisation is Information Technology (IT). Society increasingly needs and requires access to up-to-date information to make the right decisions in every sphere of life: at home, at work or at school. Nowadays, the next digital generation is attending schools, the so-called children of the network, i.e. children from the youngest age who use a computer and make use of new technologies to make this social group useable, illustrative and communicative. This is a generation which, unlike previous generations, plays, communicates, teaches, creates bonds or builds its own identity.

The study will analyse, among others, spatial information systems as information tools facilitating cognition and orientation in space, especially popular in the form of various geoportals, and map services such as: Google Maps, OpenStreetMap, Bing Maps or their national equivalents. These systems, in connection with navigation systems (e.g. GPS), make it easier to find objects in space or navigate while moving around in the field. This technology has been used for some time by not only adults, but also by children, who since the beginning of their school education have had smartphones and use applications offered by them. Given that younger and younger children are rapidly acquiring the ability to use various smartphone programs, including navigation and map services, the question arises: what is the spatial awareness of children in primary school, in the era of new IT development?

Spatial awareness in literature is often identified with spatial orientation, spatial intelligence, spatial ability or psychometric mental movement. Under all the terms there is a common definition, meaning that this awareness is the ability to understand the spatial relationships between objects in space. However, space is part of our thinking and emotions, because it is the place where we place all our experiences. The proposed methodological approach to measuring spatial awareness will take this into account.

There is a lot of research on types of spatial intelligence, especially with regard to gender or spatial orientation, but there is a lack of interdisciplinary research on how to comprehensively measure spatial awareness in schoolchildren using pedagogical and geographical knowledge and using geomatical tools as a generalized determinant approach. Additionally, an important result of the research will be to identify common features to create general profiles (models) of spatial awareness of this research group.

The need to recognize the spatial awareness of children attending primary schools was dictated by the sensitivity of this social group to IT and the initial observation of changes in social competences related to their better orientation in space. Recently, during the COVID-19 pandemic, there has been an even greater emphasis in various countries on the use of computers and remote education tools, which has shown and highlighted the need to change the current way of teaching. It was observed that the lack of traditional form of teaching and direct contact with the teacher requires the use of additional tools offered by various computer applications and new forms of communication. Since it is known from initial observations that information technologies, including map services and navigation, have influenced the development of children's awareness, to what extent and is this effect even? The first answer to this question prompts researchers to use geomatic tools, as elements of geo-information technology, which, through appropriate processing and analysis of data concerning the location, properties and mutual relations of spatial objects, will allow to measure their impact on the spatial awareness of schoolchildren.

The usefulness of this basic research will be multi-dimensional in school pedagogy, for example, to verify current curricula and develop new ones to be adapted to the level of children's spatial awareness, and to create new educational tools to support teaching and facilitate abstract and spatial thinking. The research will influence the development of the discipline of social geography in order to develop geoinformation tools (child-friendly applications, map services including dedicated 3D space models) to help children to locate themselves, e.g. in urbanised urban space and in spatial management in order for local governments to create new planning solutions to make it easier for children to move around the centre as a child-friendly space.

Therefore, the research objective is to develop a universal methodological approach using pedagogical and geographical knowledge and geomatical tools used by social geography to determine the spatial awareness of primary school children, taking into account technological, pedagogical and legal conditions. The proposed research methods will be implemented to determine the spatial awareness of children in Poland and to create a global profile of spatial awareness. The implementation of the main objective will be conditioned by detailed objectives including a review of the current state of knowledge about children's spatial awareness, determination of threshold conditions for the study, development of a geoanalysis tool and collection of observations, classification and description of levels of spatial awareness, influencing factors and diagnosis of children's spatial awareness in Poland with comparison of the results obtained to the currently accepted theories and content of education in individual classes of primary school and foreign research.