

Innovative activity of the enterprise is the necessary condition without which success and survival in the long term is impossible. This determines its consideration as an independent direction of assessment. The labor resources of the enterprise, its personnel policy and management efficiency are also subject to evaluation.

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## **A START-UP INITIATIVE TO CREATE INCLUSIVE TECHNOLOGICAL SOLUTIONS TO SUPPORT PEOPLE WITH DISABILITIES**

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In today's world, the business environment is constantly changing, and brands have already abandoned the idea of simple profitability in favour of a deeper and more meaningful approach to social responsibility. The urgency of the problem is confirmed by the following statistics. More than 1 billion people, approximately 15% of the world's population, live with some form of disability. Between 110 and 190 million adults face severe difficulties in their daily lives. Disability rates are rising due to factors such as an aging population and an increase in chronic diseases. As of January 1, 2021, there were 2.7 million disabled people in Ukraine. Among them, there are 222,300 people with disabilities in the first category, 900,800

people with disabilities in the second category, and 1.4 million people with disabilities in the third category. According to the Office for National Statistics, 163,900 children are disabled [1].

Inclusive social responsibility has become a key element of strategy for many companies, as it not only contributes to a positive reputation, but also increases customer loyalty. It involves encouraging the participation and active involvement of people with disabilities in all areas of business, can therefore take different forms and strategies. Inclusion is in everyone's hands. Well-known brands around the world have a huge impact on society. They have a powerful influence and are able to convincingly communicate the importance of inclusion to their users. Equally important, they have the ability to mobilise their audiences and inspire them to participate in socially responsible initiatives.

"I believe that there are no people with disabilities. Only the possibilities of technology are limited," said Stephen Hawking, a famous British theoretical physicist, cosmologist and writer who became known for his research in the field of black holes, relativity and quantum gravity. [2].

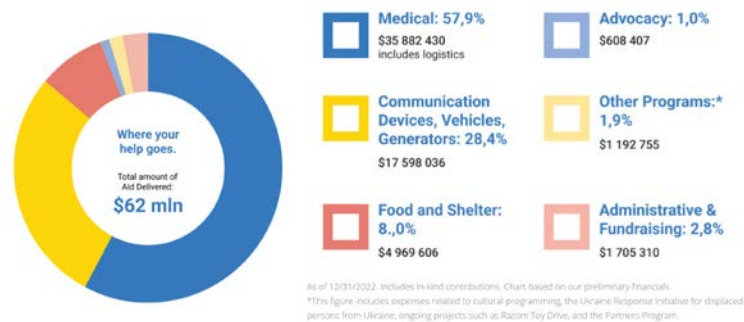
Analysing the problems of society in Ukraine, there are problems of interaction with people with disabilities. This is due to the lack of personal experience of communicating with this category of the population and insufficient accessibility for people with disabilities.

Since the beginning of the full-scale Russian invasion, the need for assistance to people with disabilities has increased, which has led to the intensification of charitable activities in Ukraine. Many charitable organisations, both Ukrainian and international, provide assistance to people with disabilities, including those affected by the war.

In addition, there are many volunteer initiatives that provide assistance to people with disabilities. These initiatives often focus on specific needs, such as providing prosthetic limbs or technical equipment, or organising events to support people with disabilities. These are charitable foundations such as Zhyttia,

Tabletochka, Krona, Ukrainian Social Assistance Foundation, Fight for Right, Razom, etc.

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Source: developed by the author based on data from [3].

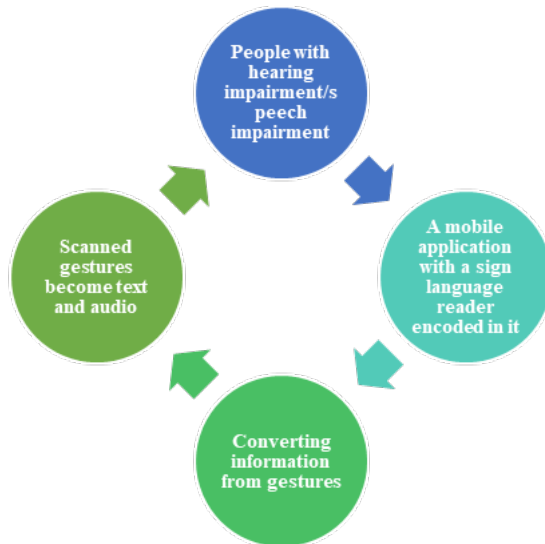
At the same time, despite the creation of various areas of activity of charitable foundations for the restoration and further functioning of persons with disabilities affected by the war, the issue of creating adaptive technological solutions remains relevant today.

In particular, in 2023, at the State University of Trade and Economics, a team of higher education students created the idea of the start-up project "EasySign" - a mobile application that contains a programme for reading sign language and converting it into text and vice versa, text into symbols - as part of a start-up competition. This start-up initiative is aimed at enabling people with hearing and speech impairments to communicate with those who do not know sign language. The value advantages of this development for potential users are convenience, ease of use, comfort of communication and interaction with society [4, p.42-47].

Having analysed the competitiveness of the start-up project, it should be noted that to use the EasySign mobile application, you only need an existing mobile device, which greatly facilitates its further use. To use the application, special gloves are required, which activate the application using sensors and special software for

smartphones and make it difficult to work with, due to the large gap between computer code and sign languages.

Figure 5 shows the principle of operation of the startup project "EasySign".



Source: compiled by the author on the basis of data from [Author's own research].

The solution is based on the use of smartphones that will have a sign language interpretation application installed on them, which will be developed by the company. The application uses the smartphone's camera to read gestures. Then the read data is processed on the server side and the translation results are displayed on the smartphone display.

This diagram shows two interlocutors, each with a smartphone with the app installed.

Process 1: The information to be translated is read out. If the translation is from object "A" to object "B", we use the smartphone camera, and if it is the other way round, we use the microphone or text input on the smartphone display.

Process № 2: Generating an input file. This process is necessary to determine the correctness of the entered data.

Process № 3: Sign language interpretation

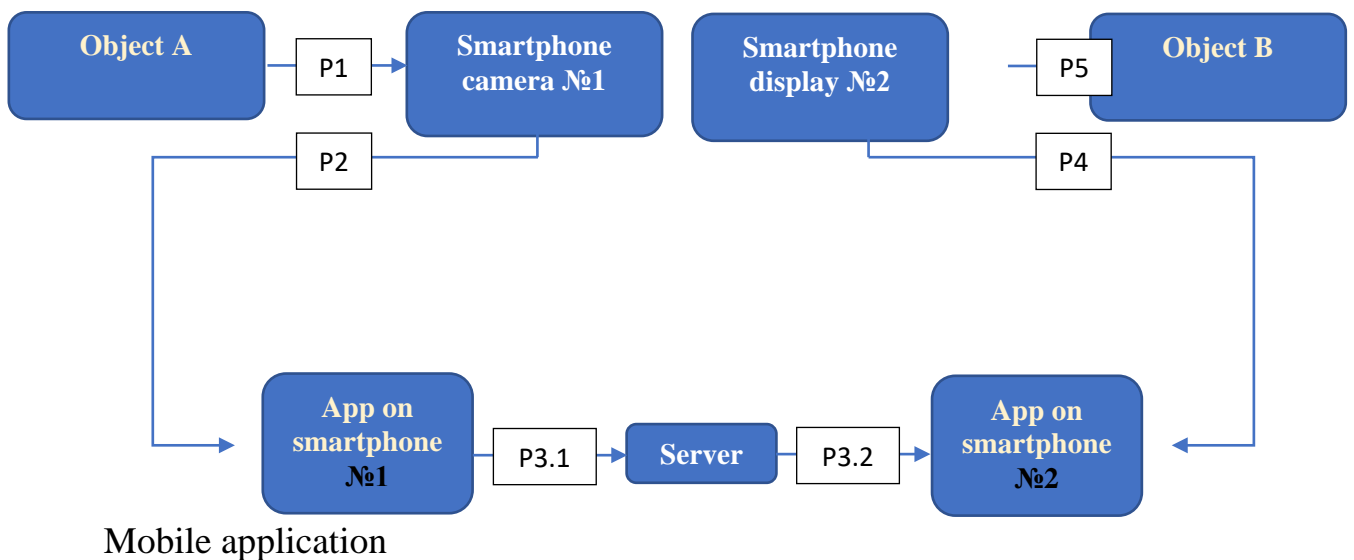
Process № 3.1: The transfer of information from the mobile application to the server for further processing can be done by encoding the data. The server processes the streaming video (a set of gestures corresponding to the Ukrainian dactylic alphabet is determined from the video sequence) and transmits a set of freeze frames to the input of the sign language interpretation system.

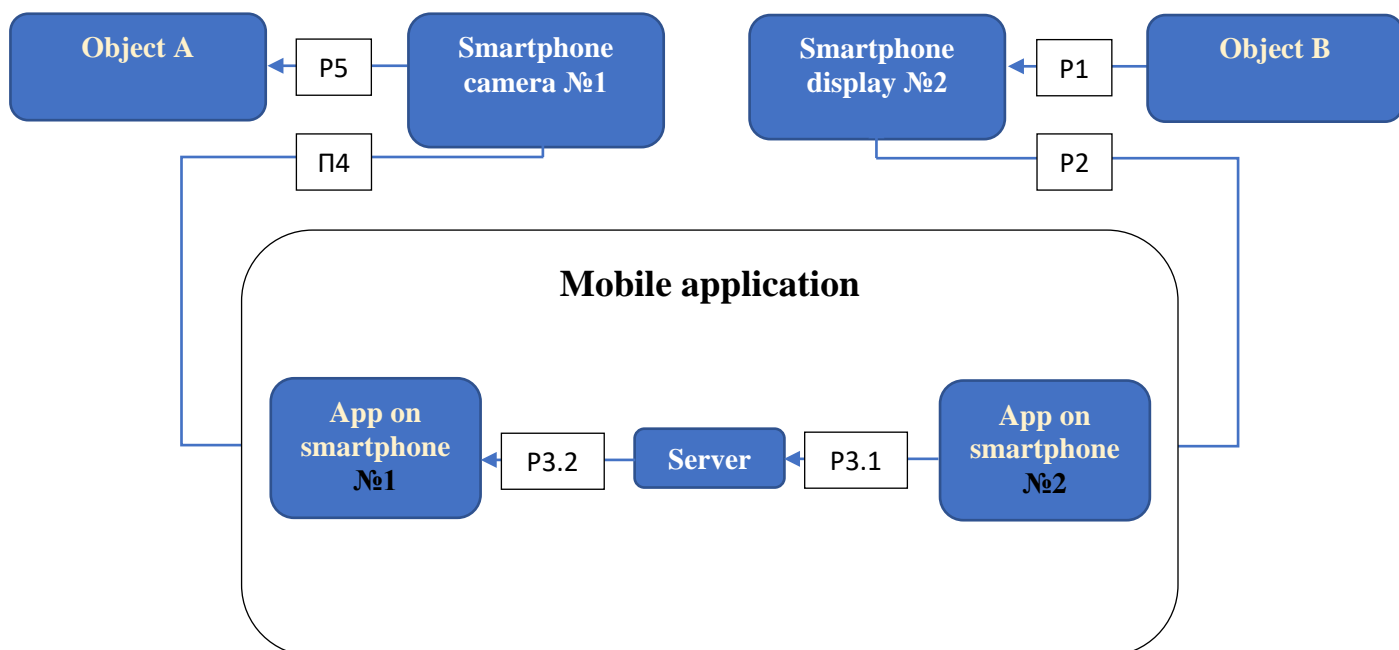
Process № 3.2: The processed information is sent to the other participant's smartphone.

Process № 4: Displaying the translated information in the app.

Process № 5: Reading the information by the target.

The start-up initiative to create inclusive technological solutions, namely the EasySign mobile application, is an important step in creating a more inclusive society. This and similar initiatives have the potential to make a significant contribution to improving the lives of people with disabilities by helping them overcome physical and social barriers that make it difficult for them to live a full life and participate in society, including in times of war.





Source: developed by the author based on data from [6, pp. 87-91].

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