

A mobile application to share sensemaking between the population and Civil Defense teams during heavy rain situations

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After the catastrophe that occurred in the mountainous region of Rio de Janeiro, especially in the city of Nova Friburgo in January 2011, caused by heavy rains, the population's perception of heavy rain risks was greatly. In the other hand, the civil defense agencies have great difficulties of predicting rainfall impacts due to the limitations of existing monitoring systems and the existing vulnerable communities. This report presents some results of a DSc thesis developed at PPGI/UFRJ [1]: the mobile application SenseApp® (available at Google Play store). The aim of this application is to share sensemaking between population and Civil Defense teams in order to transform the population's perceptions about rainfall impact to meteorological data for civil defense, by filling gaps in the existing monitoring system. This application intends to facilitate civil defense teams to inform and guide the expectations of population during emergency response. Based on Design Science Research methodology that seeks to develop and design solutions to solve a specific class of problems, the mobile phone application (Figure 1) to share information between people from communities and the civil defense team was developed and tested.

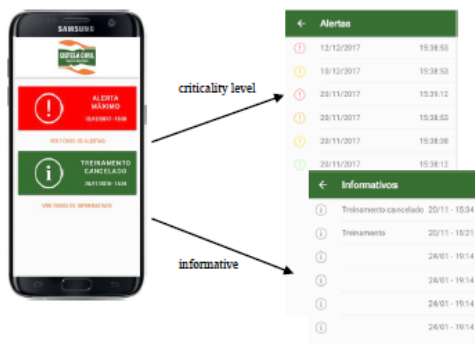


Figure 1. Basic data transfer of SenseApp

Figure 2 shows how the Civil Defense teams visualize data.

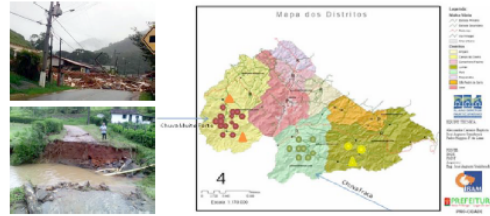


Figure 2. Data visualization

The test to verify the sensemaking transformation was done through a case study involving volunteers from the community and the civil defense team of Nova Friburgo during a real rain situation. The results shown that the continuous and iterative flow of information enables the sharing of sensemaking indicated the importance of this process for decision-making during emergency response actions [2].

References

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