Penerapan Design Thinking dalam Pengembangan Desain Interaksi Aplikasi Mobile Early Warning System untuk Bencana Alam di Indonesia = The Implementation of Design Thinking in the Development of Mobile Early Warning System Application Interaction Designs for Natural Disasters in Indonesia

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Abstrak

Kondisi geografis Indonesia yang dilalui The Ring of Fire dan memiliki garis pantai sepanjang 95.181 KM (Pregiwati, 2019) menyebabkan Indonesia rawan akan bencana alam berupa letusan gunung api, tsunami, dan gempa bumi. Oleh sebab itu, dibutuhkan suatu early warning system (EWS) yang dapat memberikan informasi pemantauan kejadian alam di wilayah Indonesia agar masyarakat lebih siaga dalam menghadapi bencana alam. Sayangnya, EWS yang telah dimiliki Indonesia memiliki rating yang masih cukup rendah. Keluhan pengguna yang disampaikan melalui ulasan aplikasi pada App Store menunjukkan bahwa adanya kekurangan pada fitur aplikasi, desain antarmuka sistem, serta alur informasi yang tidak jelas. Penelitian ini bertujuan untuk merancang desain interaksi aplikasi mobile EWS bencana alam sebagai pengembangan dari aplikasi sebelumnya yang dapat mengatasi keluhan-keluhan pengguna. Dalam pengembangan desain interaksi, digunakan metode design thinking. Dalam implementasinya, metode design thinking terdiri atas lima proses utama, yakni define, needfinding & synthesis, ideation, prototyping, dan testing. Dalam tahap define, dilakukan wawancara dengan responden yang ahli di bidang early warning system dan bencana alam Indonesia. Selanjutnya, pada tahap needfinding & synthesis, dilakukan wawancara dengan responden umum. Dari proses-proses tersebut, penelitian ini akan menghasilkan analisis fitur dan kebutuhan pengguna, stakeholder EWS di Indonesia, rumusan desain interaksi, serta penilaian evaluasi kegunaan (usability) dari rumusan desain yang telah dibuat. Fitur-fitur yang dikembangkan dalam aplikasi ini antara lain fitur geolokasi dan geotagging, fitur berita dan prediksi bencana alam, fitur pemberian ulasan dampak bencana, fitur notifikasi, fitur informasi tindakan penyelamatan, serta fitur informasi lokasi posko dan data korban. Penelitian ini dapat memberikan manfaat dalam meningkatkan wawasan dan pengetahuan pembaca terkait EWS untuk bencana alam serta menjadi produk acuan untuk pengembangan EWS Indonesia di masa yang akan datang.

.....The geographical condition of Indonesia which is passed by The Ring of Fire and has a coastline of 95,181 KM (Pregiwati, 2019) causing Indonesia to be prone to natural disasters in the form of volcanic eruptions, tsunamis, and earthquakes. Therefore, an early warning system (EWS) is needed to provide information on monitoring natural events which can help people be more alert. Unfortunately, Indonesia's early warning system has a fairly low rating. User complaints submitted through application reviews indicate that there are deficiencies in application features, system interface design, and unclear information flow. This study aims to design an interaction design for a natural disaster early warning system mobile application as a development of the previous one that can overcome user complaints. In the development of interaction design, the design thinking method is used. In its implementation, the design thinking method consists of five main processes, namely define, needfinding & synthesis, ideation, prototyping, and testing. In the stage define, interviews were conducted with respondents who are experts in the field of early

warning systems and Indonesian natural disasters. Furthermore, at the needfinding & synthesis stage, interviews were conducted with general respondents. From these processes, this research will produce an analysis of user needs and features, stakeholder early warning system in Indonesia, formulation of interaction design, and usability evaluation assessment of the design formulation that has been made. The features developed in this application include geolocation and geotagging features, news and predictions of natural disasters features, features for providing disaster impact reviews, notification features, feature that provide information about rescue actions, and feature that provide information about post locations and victims data. This research can provide benefits in increasing the reader's insight and knowledge regarding the early warning system (EWS) for natural disasters and also being a reference product for the development of Indonesia's EWS in the future.