

1. INTRODUCTION

Retail is one of the economic indicators of the trade component that contributes a considerable 19-31% to Gross Regional Domestic Income (PDRB) in every region in Indonesia [1]. The business competition in the development of Information technology has increasingly advanced over time, and the impact has been felt by most of the community where the simple process becomes modern and fast-paced so that it impacts all sectors, one of which is the retail sector [2]. For traditional retail to not be abandoned, it needs to make changes and adapt to existing developments. Even if UKM in Indonesia can adapt to technological developments, it can encourage UKM growth by 12% [3].

Online shopping has become a consumer choice, and it is undeniable that online shopping also has the convenience of getting the desired item besides not spending time and effort. The marketplace is one form of technological development to facilitate business owners in marketing their product [4][5]. Based on these problems, the development of a marketplace website is intended for consumers who want to make the process of buying and selling products offered and for UKM businesses, especially the retail sector, to market their products by utilizing technology. A Software development process is needed to develop the marketplace website to create a product that meets the market and users' needs. There are several software development methods such as Waterfall, V-Shaped, and Agile. Each method has its advantages and disadvantages [6].

One software development method is Agile with a Scrum framework that can provide flexibility to control and manage requirements for software development better, and scrum is designed to improve production capabilities in the development process [7]. The main focus of scrum is not the delivery of radical innovations, and scrum has a lack of attention to the design that can create the wrong product or not follow the user needs to produce products that are accepted by the market and must be reworked [8][9]. Therefore, Design Thinking is necessary for the software development process to gather information to find hidden aspects or user needs, communicate ideas, and find the solution [8][10]. Based on research by Häger et al. [11], entitled DT@Scrum, research is still needed to apply different tools, techniques, and scopes to design thinking and scrum integration. Another method is the design sprint created by Google Venture has a five-day process for solving problems through prototyping and brainstorming with users. The difference between design sprint and design thinking is that design sprint is a linear process and sensitive to time and focuses on solving problems, in contrast to design thinking which is an iterative process and focuses on defining and solving problems [12][13]. Therefore, in this research, applied design thinking integrated with scrum in the development of website marketplace for retail aims to understand the influence and usefulness of integrating design thinking and scrum in the software development process.

The research is structured as follows. Related work will be discussed in section 2. Furthermore, section 3 will discuss the results of the performance website development marketplace for retail with the integration of design thinking and scrum. Finally, section 4 will discuss the conclusions of the research.