Abstract— **The attendance management system is widespread today in Indonesia. One everyday use case is recording attendance at an enterprise. However, the existing attendance system still poses some risks. One of the biggest causes is when the smart card used does not have a good quality guarantee and does not use an official Indonesian identity card, namely e-KTP. This issue causes the wasteful use of smart cards. In addition, this is not under the Law of the Republic of Indonesia. Therefore, this research focuses on utilizing the e-KTP as an authentication factor in recording attendance. In addition, this study uses two methods: survey methods and theoretical methods. As a result, the proposed mechanism system has fewer steps than the current enterprise's (2 out of 3). With the e-KTP as an authentication factor, the results obtained indicate that the security system testing has successfully mitigated all technical existing risks (R2, R4, and R5). User Agreement Testing also shows the same results, participant's perspectives of R1 and R3 scenarios more feel comfortable with e-KTP as the proposed ID cards in their enterprise. This study has been founding a new mechanism approach that is handled 100% risk (5 risks are covered), with all of the enterprise respondent's responses that showed the agreement about the more efficiency and effectiveness of the proposed scheme that using e-KTP than the enterprise's smartcard owned.**

Keywords— *Attendance System, Factor Authentication, e- KTP, Enterprise*