## The Utilizing of Smartphone Applications in Product Development

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## **Abstract**

The research focuses on taking advantage of smartphone applications as one of the solutions to develop different products by developing processes to control the characteristics of products through the development of programming for those applications to add the advanced characteristics and features of the products periodically. Smartphones are characterized by their small size, direct contact with the user, and their possession of many technical capabilities, and statistics indicate the presence of nearly 5 billion smartphones, and these smartphones contain many applications in various fields. The problem lies in the need to produce many product control tools that are damaged several times during the product life cycle, and their ability to keep pace with development becomes weak, which limits their ability to satisfy the renewable desires of users, and continuing to develop means of statement and control of products by traditional methods leads To waste the resources and energy used in production, and results in many products that operate with high efficiency and the user refrains from them, due to their inability to communicate and fulfill their desires, which constitutes a burden on the environment. The research dealt with traditional and digital display and control systems, how to benefit from smartphone applications in developing products, managing the relationship between the user, the product and the manufacturer, in addition to showing the impact of this on achieving sustainability and reducing the volume of waste resulting from the transformation of many products into waste as a result of their inability to achieve desires of users. finally, the research reached the importance of benefiting from smartphone applications in developing products, satisfying the user's desires personally, reducing the waste of energy used in traditional development processes, and reducing the volume of technical waste.

## **Key words**

Product Development, Display and Control Systems, Smartphone Applications, Internet of Things (IOT).

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