A FRAMEWORK FOR ASSESSING THE VIABILITY OF RADIO REQUENCY IDENTIFICATION PROJECT IN HEALTHCARE SECTOR

Name	:	IWAN VANANY
Institutions Address	:	Department of Industrial Engineering, Institute Teknologi Sepuluh Nopember (ITS) Kampus ITS, Sukolilo, Surabaya 60111, INDONESIA Phone:+62-31-5939361, Fax.: +62-31-5939362
Home Address	:	Jagir Sidoresmo VI no 9 Surabaya, 60244, INDONESIA
Email	:	vanany_its@yahoo.com or vanany@ie.its.ac.id

ABSTRACT

Radio frequency identification (RFID) technology is a promising information technology which is growing rapidly in the global market and is increasingly applied in various industries. However, many organisations adopt a "wait and see" attitude towards its implementation and many RFID projects have been unsuccessful in achieving the full benefits of the technology. In some application areas for example healthcare, the perceived barrier is the lack of a structured framework to guide the user in defining, identifying and justifying the RFID implementation exercise. The objective of this research is to develop a new framework to structure the complex problem of assessing RFID project viability in healthcare. This framework has five phases consisting of suitable criteria and appropriate techniques and tools. Some techniques (e.g., analytical hierarchy process (AHP) and flow chart) are used to solve some important issues of RFID justification when developing the new framework. The main outputs of the framework which will provide the following information according to the five phases of the framework are: (1) internal and external RFID adoption factors, (2) suitable criteria, (3) stakeholder expected benefits, (4) where-best application area, and (5) business process improvement and project roadmap. The applicability and validity of the framework have been tested and validated in several Malaysian and Indonesian hospitals through case study methodology. The results of this study show that the proposed framework has several strengths in terms of comprehensiveness, guidelines aspects and providing quantifiable RFID expected benefits from the stakeholder viewpoint. It is also capable of simplifying the actual practice of RFID investment assessment and provides management with a potentially powerful decision-aid tool.