

[Find PDF](#)
[Export...](#)
[Add to Marked List](#)

## A Novel Conceptual Framework of Health Information Systems (HIS) Sustainability

by: [M. Mohamadali, N. A. Noor Azizah](#)<sup>[1]</sup>; [Ab Aziz, N. F. \(Ab Aziz, Nur Faizah\)](#)<sup>[1]</sup>; [Zahari, N. A. M. \(Zahari, Nurul Aqilah Mohd\)](#)<sup>[1]</sup>

2017 5TH INTERNATIONAL CONFERENCE ON RESEARCH AND INNOVATION IN INFORMATION SYSTEMS (ICRIIS 2017): SOCIAL TRANSFORMATION THROUGH DATA SCIENCE  
 Book Group Author(s): [IEEE](#)  
 Book Series: International Conference on Research and Innovation in Information Systems  
 Published: 2017  
 Document Type: Proceedings Paper

### Conference

**Conference:** 5th International Conference on Research and Innovation in Information Systems (ICRIIS) - Social Transformation through Data Science  
**Location:** Langkawi, MALAYSIA  
**Date:** JUL 16-17, 2017

### Abstract

Sustainable technology means technology is capable of being maintained over a long span of time; independent of shifts in both hardware and software. Effective implementation and use of Health information Systems (HIS) for years to come is crucial as sustainable HIS. Numbers of studies have discussed various factors contributes towards barriers for successful implementation of HIS. However, very few studies discussed factors on HIS sustainability. Through critical analysis of existing literature on success, failure and challenges of HIS adoption, this paper identifies four crucial factors that shape the sustainable HIS. The importance of strong leadership support, proper contingency planning and practice, continuous vendor support and protection of security and privacy issues are identified by classifying all the factors within these four constructs, and with it, we argue these factors crucial for sustainable HIS. This paper proposes a novel conceptual framework which incorporated all these constructs as HIS sustainability factors. This paper also described the theoretical basics behind the development of the model and methodology to be employed to validate the proposed model.

### Keywords

**Author Keywords:** [Health Information systems](#); [sustainability](#); [framework](#); [leadership support](#); [security and policy](#); [proper contingency plan](#); [IT support](#)  
**KeyWords Plus:** [CARE](#); [ISSUES](#)

### Author Information

**Reprint Address:** Mohamadali, NA (reprint author)  
 + IIUM, Dept Informat Syst, Jalan Gombak, Kuala Lumpur 53100, Malaysia.  
**Addresses:**  
 + [ 1 ] IIUM, Dept Informat Syst, Jalan Gombak, Kuala Lumpur 53100, Malaysia  
**E-mail Addresses:** [nazizah@iium.edu.my](mailto:nazizah@iium.edu.my); [faizah.aaziz@yahoo.com](mailto:faizah.aaziz@yahoo.com)

### Funding

Funding Agency	Grant Number
Ministry of Higher Education Malaysia	RAGS14-054-0117

[View funding text](#)

### Publisher

IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA

### Categories / Classification

### Citation Network

In Web of Science Core Collection

0

Times Cited

[Create Citation Alert](#)

44

Cited References

[View Related Records](#)

### Use in Web of Science

Web of Science Usage Count

1

Last 180 Days

2

Since 2013

[Learn more](#)

### This record is from:

**Web of Science Core Collection**  
- Conference Proceedings Citation Index-Science

### Suggest a correction

*If you would like to improve the quality of the data in this record, please suggest a correction.*

[See more data fields](#)

## Cited References: 44

Showing 30 of 44 [View All in Cited References page](#)

(from Web of Science Core Collection)

1. **The Security of Information Systems in Greek Hospitals** Times Cited: **1**  
 By: Aggelinos, G.; Katsikas, S.K.  
 Trust, Privacy and Security in Digital Business. 10th International Conference (TrustBus 2013). Proceedings: LNCS 8058 Pages: 112-23 Published: 2013
2. **Factors Influencing an Organisation's Intention to Adopt Cloud Computing in Saudi Arabia** Times Cited: **2**  
 By: Alkhater, N.; Wills, G.; Walters, R.  
 IEEE 6 INT C CLOUD C Published: 2014
3. **Overcoming Challenges to Health IT Adoption in Small, Rural Hospitals** Times Cited: **6**  
 Group Author(s): Altarum Institute  
 Report Published: 2011
4. **Barriers in Adoption of Health Information Technology in Developing Societies** Times Cited: **11**  
 By: Anwar, Fozia; Shamim, Azra  
 INTERNATIONAL JOURNAL OF ADVANCED COMPUTER SCIENCE AND APPLICATIONS Volume: 2 Issue: 8 Pages: 40-45 Published: AUG 2011
5. **Threats and Challenges to Security of Electronic Health Records** Times Cited: **2**  
 By: Bhartiya, S.; Mehrotra, D.  
 LECT NOTES I COMPUTE Volume: 115 Pages: 543-559 Published: 2013
6. **How do top managers support strategic information system projects and why do they sometimes withhold this support?** Times Cited: **24**  
 By: Boonstra, Albert  
 INTERNATIONAL JOURNAL OF PROJECT MANAGEMENT Volume: 31 Issue: 4 Pages: 498-512 Published: MAY 2013
7. **Measuring the Cost Impact of Hospital Information Systems: 1987-1994** Times Cited: **1**  
 By: Borzekowski, R.  
 Board of Governors of the Federal Reserve System Pages: 1-7 Published: 2002
8. **The Adoption of Electronic Medical Records and Decision Support Systems in Korea** [\(View record in KCI-Korean Journal Database\)](#) Times Cited: **27**  
 By: Chae, Young Moon; Yoo, Ki Bong; Kim, Eun Sook; et al.  
 HEALTHCARE INFORMATICS RESEARCH Volume: 17 Issue: 3 Pages: 172-177 Published: SEP 2011
9. **Challenges in the Adoption of Medical Information Systems** Times Cited: **1**  
 By: Eriksson, O.  
 39 HAW INT C SYST SC Published: 2006  
 M. M. a.
10. **Hospital Information System (His) Implementation In A Public Hospital: A Case Study From Malaysia** Times Cited: **1**  
 By: Fadhil, N. F. M.; Jusop, M.; Abdullah, D. A. A.  
 Far East Journal of Psychology & Business Volume: 8 Issue: 3 Published: 2012
11. **Implementation of E-Health Record Systems and E-Medical Record Systems in China** Times Cited: **17**  
 By: Gao, X; Xu, J; Sorwar, G.  
 The International Technology Management Review Volume: 3 Issue: 2 Pages: 127-139 Published: 2013  
 J

[Security Challenges and Success Factors of Electronic Healthcare System](#)

12. By: Ghazvini, Arash; Shukur, Zarina Times Cited: 14  
4TH INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND INFORMATICS (ICEEI 2013) Book Series: Procedia Technology Volume: 11  
Pages: 212-219 Published: 2013
13. **The SI challenge in health care** Times Cited: 71  
By: Grimson, J; Grimson, W; Hasselbring, W  
COMMUNICATIONS OF THE ACM Volume: 43 Issue: 6 Pages: 49-55 Published: JUN 2000
14. **Accessibility Hospital Information System-Malaysian Experience** Times Cited: 2  
By: Hamid, N. B. A.  
30 INT SEM PUBL HLTH Published: 2010
15. **A "Ubiquitous Environment" through Wireless Voice/Data Communication and a Fully Computerized Hospital Information System in a University Hospital** Times Cited: 32  
By: Hanada, Eisuke; Tsumoto, Shusaku; Kobayashi, Shotai  
E-HEALTH Book Series: IFIP Advances in Information and Communication Technology Volume: 335 Pages: 160-+ Published: 2010
16. **Implementation of Total Hospital Information System (THIS) In Malaysian Public Hospitals: Challenges and Future Prospects** Times Cited: 1  
By: Hassan, R.; Tajuddin, M. Z. M.  
International Journal of Business and Social Research Pages: 33-41 Published: 2012
17. **Barriers to the Adoption of Health Information Technology in Arab Countries' Hospitals: Practitioners' Perspective** Times Cited: 1  
By: HAYAJNEH, D. Y. A.; ZAGHLOUL, D. A. A.  
24 INT C EUR FED MED Published: 2012
18. **The implementation of Hospital Information System (HIS) in tertiary hospitals in Malaysia: a qualitative study** Times Cited: 3  
By: Ismail, A.; Jamil, A. T.; Rahman, A. F. A.; et al.  
Malaysian Journal of Public Health Medicine Volume: 10 Issue: 2 Pages: 16-24 Published: 2010  
A. A. T.  
[\[Show additional data\]](#)
19. **Adoption of Hospital Information System (HIS) in Malaysian Public Hospitals** Times Cited: 1  
By: Ismail, N. I.; Abdullah, N. H.; Shamsuddin, A.  
GLOB C BUS SOC SCI K Published: 2015
20. Title: [not available] Times Cited: 12  
By: Izzatty Ismail, Nurul; Hazana Abdullah, Nor; Shamsudin, Alina; et al.  
International Journal of Social Science and Humanity Volume: 3 Pages: 115 Published: 2013  
[\[Show additional data\]](#)
21. **Hopes and fears in implementation of electronic health records in Bangladesh** Times Cited: 6  
By: Khan, SZ; Shahid, Z; Hedstrom, K; et al.  
The Electronic Journal of Information Systems in Developing Countries Volume: 54 Issue: 8 Pages: 1-18 Published: 2012  
[\[Show additional data\]](#)
22. **The challenges of sustainability of health information systems in developing countries: comparative case studies of Mozambique and Tanzania** Times Cited: 30  
By: Kimaro, H.; Nhampossa, J.  
Journal of Health Informatics in Developing Countries Volume: 1 Pages: 1-10 Published: 2007
23. **Analysis and Evaluation about the Barriers of the adoption and Implementation of Electronic Health Record System: A Information Comparison study between China and Korea, in Technology in Medicine and Education (ITME)** Times Cited: 1  
By: Lee, J. - k; Chen, Y.i.  
INF TECHN MED ED ITM Published: 2012
24. **Healthcare professionals' organisational barriers to health information technologies-A literature review** Times Cited: 118  
By: Lluch, Maria  
INTERNATIONAL JOURNAL OF MEDICAL INFORMATICS Volume: 80 Issue: 12 Pages: 849-862 Published: DEC 2011
25. **HIMS Blueprint** Times Cited: 1

26. **An investigation of the success of hospital information systems implementation: a case study** Times Cited: 3  
By: Mahdavian, M.; Nazarian, H.; Mahdavian, M.; et al.  
2014 International Computer Science and Engineering Conference (ICSEC) Pages: 329-33 Published: 2014
27. **Benefits and drawbacks of electronic health record systems** Times Cited: 161  
By: Menachemi, Nir; Collum, Taleah H.  
RISK MANAGEMENT AND HEALTHCARE POLICY Volume: 4 Pages: 47-55 Published: 2011
28. **Sustainable Information Technology for Global Sustainability** Times Cited: 2  
By: Misund, G.; Hoiberg, J.  
DIG EARTH INF RES GL Published: 2003  
Paper presented at the
29. **Sustainability of health information systems: a three-country qualitative study in southern Africa** Times Cited: 9  
By: Moucheraud, Corrina; Schwitters, Anee; Boudreaux, Chantelle; et al.  
BMC HEALTH SERVICES RESEARCH Volume: 17 Article Number: 23 Published: JAN 10 2017
30. **Implementation Challenges of Hospital Information System in Super Specialty Hospital A Case Study of PGIMER, Chandigarh** Times Cited: 1  
By: Murthy, B. K.; Cheema, A. S.; Srivastava, P. K.  
GLOB HUM TECHN C S A Published: 2014

**Showing 30 of 44** [View All in Cited References page](#)

