

## Association for Information Systems AIS Electronic Library (AISeL)

---

ICIS 2007 Proceedings

International Conference on Information Systems  
(ICIS)

---

December 2007

# The Dynamics of Sustainability of Electronic Knowledge Repositories

Amitava Dutta  
*George Mason University*

Atreyi Kankanhalli  
*National University of Singapore*

Rahul Roy  
*Indian Institute of Management Calcutta*

Follow this and additional works at: <http://aisel.aisnet.org/icis2007>

---

### Recommended Citation

Dutta, Amitava; Kankanhalli, Atreyi; and Roy, Rahul, "The Dynamics of Sustainability of Electronic Knowledge Repositories" (2007).  
*ICIS 2007 Proceedings*. 52.  
<http://aisel.aisnet.org/icis2007/52>

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 2007 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# THE DYNAMICS OF SUSTAINABILITY OF ELECTRONIC KNOWLEDGE REPOSITORIES

**Amitava Dutta**

School of Management  
George Mason University  
Fairfax, VA 22030  
[adutta@gmu.edu](mailto:adutta@gmu.edu)

**Atreyi Kankanhalli**

Department of Information Systems  
School of Computing  
National University of Singapore  
[disatrey@nus.edu.sg](mailto:disatrey@nus.edu.sg)

**Rahul Roy**

MIS Group  
Indian Institute of Management Calcutta  
Calcutta 700104, India  
[rahul@iimcal.ac.in](mailto:rahul@iimcal.ac.in)

## Abstract

*Electronic knowledge repositories (EKR) are the most common form of knowledge management system implemented by organizations. After inception, some EKRs become self-sustaining successes but others atrophy from lack of use. The literature has identified multiple factors that contribute to the success or ultimate demise of EKRs, such as incentives, system capability, and management promotion. However, it is unclear how these factors interact over time in determining the sustainability of EKRs. We use the system dynamics methodology to develop a holistic causal model of this interaction among the different factors. The model helps identify the mechanics underlying the usage patterns experienced by EKRs. The model structure is first verified through a focus group consisting of KM academics and practitioners. We then report initial results from simulating this model under different scenarios of management interventions and technology features to better understand the conditions that lead to self-sustaining, and therefore successful, EKRs.*

**Keywords:** Electronic knowledge repositories, sustainability, system dynamics, modeling.