Reducing the Perceived Risk of E-Government Implementations: The Importance of Risk Communication

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ABSTRACT

Perceived risk has been identified by the literature as a limiting factor in e-government adoption and success. However, there has been little effort spent examining how and why perceived risk comes to differ from actual probabilistic risk and the means by which the gap can be reduced. These questions were examined by applying the Social Amplification of Risk Framework to the case of e-government in the United States. Several factors that are known to exacerbate perceived risk were identified from the literature and shown to be in place in the United States. The presence of these factors suggests that more effective risk communication is required in order to realign perceived risk with probabilistic risk. Recommendations on how to improve e-government risk communication through technical and human means are provided.

Keywords: Digital Government, Electronic Government, Risk

INTRODUCTION

E-government is viewed by many as one of the most interesting and dynamic examples of the integration of information technology and information policy in order to affect social change. The promises of e-government include increased government transparency, enhanced accountability, improved services to citizens, and greater citizen participation to name only a few. As e-government begins to mature and diffuse, increasing attention is being paid to the factors that drive e-government success and the risks that can cause e-government projects to fail.

Much of the existing work on risk in the context of e-government implementations has focused on traditional project management risks and the unique roles these risks play in large-scale public information systems. This body of literature addresses the importance of identifying stakeholder needs, the importance of creating detailed workflows (Pardo & Scholl, 2002), the importance of incorporating sufficient security mechanisms into the system design (Lambrinoudakis et al., 2003), and many other factors that have been shown to reduce risk in private sector IT projects.
and also play a critical role in e-government implementations.

In contrast to this more traditional conception of risk as a set of internal threats to the project that must be mitigated through better project management techniques or technology, a growing stream of research has begun to focus on another aspect of risk, the risk that citizens perceive to be associated with the use of an e-government system. Perceived risk differs from probabilistic risk in that it is not fully determined by the probability of an undesired outcome but is affected by social, psychological, cultural and institutional factors. A number of recent studies have found perceived risk to be a significant factor affecting citizen adoption of e-government services (Bélanger & Carter, 2008; Horst et al., 2007). The role that perceived risk plays in e-government adoption and success can be illustrated by the fact that while there has been an aggressive push throughout all levels of the United States (U.S.) government to expand e-government services, U.S. citizens have been found to prefer a slower pace of expansion. This preference for slower growth is driven by the fact that citizens are more concerned with the safety and privacy of their personal data housed in e-government systems than they are with receiving the additional benefits that expanding e-government services can provide (Dizard, 2000; Gruber, 2003; McGinns, 2003; Pardo, 2000).

While other research has empirically demonstrated that perceived risk is an important factor that can limit e-government adoption and success, little work has been done to explain the means through which perceived risk of e-government comes to deviate from probabilistic risk and the steps that can be taken to mitigate it. These issues will be addressed by applying the Social Amplification of Risk Framework (Kasperson et al., 1988) to the case of e-government in the U.S.

The next section, Social Amplification of Risk Framework and U.S. E-Government, will overview the risk perception framework employed in this research, identify several factors drawn from the literature that are known to amplify and distort risk perception, and demonstrate that those factors are present in the U.S. and contributing to a misalignment between perceived risk and probabilistic risk on the part of the citizens. The following section, Using Risk Communication to Mitigate Perceived Risk, discusses the importance of using risk communication as a tool to mitigate perceived risk that has become distorted through a social amplification process. Best practice risk communication guidelines are identified and combined with insights drawn from cases to produce several recommendations that will help to attenuate perceived risk. Finally, conclusions and the contributions of the article are discussed.

SOCIAL AMPLIFICATION OF RISK FRAMEWORK AND U.S. E-GOVERNMENT

Kasperson et al. (1988) detail a framework for risk perception called the Social Amplification of Risk Framework (SARF). The SARF explains the process by which risk events are communicated as they flow from the source to the receiver. As information about risk flows down the communication path, it is amplified, filtered and reorganized along each step of the way. These distortions are magnified at each step and through feedback along the communication path. This dynamic process creates higher-order distortions that produce ripple effects which can greatly alter public perceptions of risk. This process is depicted in Figure 1.

To illustrate, consider a hypothetical risk event—a data breach at a government agency. Information about this event would be known to sources (eyewitnesses, the agency involved, government spokesperson) and could potentially be known either directly by transmitters (media, public interest groups, other leaders) or indirectly through information provided by the sources. These transmitters then pass on the information to receivers (the general public, specific groups, other affected institutions). Public perceptions of the risk event then feed back into...
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