

# Businesses can't afford to ignore the human element of IT, study says

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Mood and personality play an important role in how companies should manage their IT systems, according to a new study co-authored by a researcher at Binghamton University, State University of New York.

"Organizations focus too much on the technical and mechanical aspects of IT errors, rather than the human and environmental aspects of the errors," said Sumantra Sarkar, assistant professor of information systems in the School of Management. "Our study suggests the mood and [personality traits](#) of the software development team affect how they report on self-committed errors in IT projects. A minor glitch in design or programming can have devastating consequences. For example, even a small error in software design could result in a NASA capsule disaster in outer space."

"The roles of mood and conscientiousness in reporting of self-committed errors on IT projects," published in the *Information Systems Journal*, examines how human elements influence IT errors and decision-making. The research also establishes a theoretical framework intended to explain some of the decision-making processes associated with reporting self-committed errors.

Since the research suggests IT errors are caused by a combination of factors, the researchers said that it is important to adopt various procedures to identify inefficiencies, ineffective care and preventable errors to make improvements associated with the IT systems. And, it is important to look at individuals working on information technology

teams.

According to the paper, current research on IT error reporting mainly explores the issues related to resources and technology, such as budget shortages, hardware malfunctions or labor shortages.

"We found a difference in the self-committed IT error reporting process of developers depending on if they were in a positive or [negative mood](#)," Sarkar said. "When IT workers were in a [positive mood](#), they were less likely to report on self-committed errors. This can be explained by how being in a positively elevated state can impede one's cognitive processing."

The study has managerial implications, too.

"Practitioners often perceive software development as dependent on machines, as opposed to humans, which is not a sustainable mindset," Sarkar said "Managers should establish a good rapport with team members to foster an environment that will allow employees to speak up when they feel their mood could affect their reporting decisions."

The paper also states IT managers should emphasize to their employees the benefits of reporting self-committed because, ultimately, IT errors that go unreported could hurt the company more in the long run.

Sarkar said employees should be cognizant how on their mood could impact their reporting decisions. "Before IT workers make decisions regarding self-committed errors, they should assess their mood and determine if they should wait until they are in a more neutral state to make reporting decisions," he said.

The paper also looks at how the personality trait conscientiousness can influence error-reporting decisions.

"We identified conscientiousness as being one of the most important personality traits related to IT error-reporting decisions. Conscientious workers have a strong sense of duty and selflessness and are more willing to [report](#) self-committed errors," Sarkar said. "Managers should be aware that conscientious team members are less susceptible to the influences of mood on decision making."

"Organizations of the Information Age need to be reminded that software development is still reliant on humans. The mood and personality characteristics of IT workers influence decision making and should be considered as a contributor to the reliability of [information systems](#). Even a small bug in software systems can have severe consequences and put lives at risk," Sarkar added. "Exploring the human elements of IT could solve and prevent problems."

"The roles of [mood](#) and conscientiousness in reporting of self-committed [errors](#) on IT projects" was co-authored by Hyung Koo Lee of HEC Montréal, Mark Keil of Georgia State University and Jeff Smith of Miami University.

**More information:** Hyung Koo Lee et al, The roles of mood and conscientiousness in reporting of self-committed errors on IT projects, *Information Systems Journal* (2016). [DOI: 10.1111/isj.12111](https://doi.org/10.1111/isj.12111)

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