

## Governing Energy

### Dilemma

Volume 2 Number 14—July 17, 2013

On July 6, 2013 Asiana Airlines flight from Seoul, South Korea crashed while landing at San Francisco International Airport.<sup>i</sup> As of this writing, the final report is probably months out; however, a recent Wall Street Journal Op-Ed posits an interesting perspective.

*Bring in the Robots* suggests that increased automation in the airline cockpit may lead to a “deskilling” of pilots with the subsequent increase in the likelihood of errors.<sup>ii</sup> The article goes on to address potential criminality issues but clearly makes the case that contemporary automation systems may be superior to human *best efforts*.

This man-machine interface is not limited to air travel. Almost all complex industrial operations are a function of intelligent systems and human interface. Human rely on machines to make a myriad of decisions and we think nothing about the results attained from non-human decisions.

For example, calculators and spreadsheets routinely “crunch numbers” and most accept the results without question. However, are the calculations mathematically correct? At least so far machines are only as good as their human programmers.

The Wall Street Journal commenter makes a case that perhaps machines are smarter and better equipped than an individual operator to make split second life or death decisions. Perhaps, but isn't it better to make sure that human decision-making that depends on advance systems are not “deskilled” and are better equipped to overrule the computer?

At least for the foreseeable future, the human can supersede machine decision-making. The use of machines is commonplace and their use even complacent. Those tasked with managing these systems are challenged to understand (often split second decisions) when the machine is making the correct decision and when the human must interject.

This is not a simplistic problem but one based on expertise learned (in some cases) over decades. The US National Transportation Board and its South Korean peer will undoubtedly come to a conclusion and issue changes to air worthiness requirements. It will be interesting to see how the man-machine interface is addressed in that final ruling.

The challenges for others, is to learn from those industry practices and changes to assure that similar incidents do not occur. The contemporary man-machine interface can be demanding and one can surmise it will get even more difficult in the future. How organizations deal with this issue has a direct impact on the organization's bottom line and shareholder value.

## **Who makes the best decisions in your organization, the machine or the human?**

### **About the Author**

Dr. [Scott M. Shemwell](#) has over 30 years technical and executive management experience primarily in the energy sector. He is the author of two books and has written extensively about the field of operations management. Shemwell is also the CEO of Knowledge Ops, Inc.; a firm that focuses on providing its customers with solutions enabling operations excellence and regulatory compliance management.

### **End Notes**

---

<sup>i</sup> [http://www.cbsnews.com/8301-201\\_162-57592529/plane-crash-at-san-francisco-airport-2-dead/](http://www.cbsnews.com/8301-201_162-57592529/plane-crash-at-san-francisco-airport-2-dead/)

<sup>ii</sup> <http://online.wsj.com/article/SB10001424127887323823004578595323218709446.html>