2.3 Assess how and why information technology gives rise to ethical dilemmas not present in other technologies

Ethical Dilemma in the Use of Information Technology

Ethical dilemmas have always come with each advancement in technology. While information technology continues to evolve, so do the decisions business owners and IT managers must face. Just a few years ago, software piracy was an issue for many businesses, however that's much less the case today. In the past couple of years, new ethical issues in information technology have evolved, like how customer data should be protected, and how artificial intelligence should be used in a way that satisfies, not just the law, but customer's expectations.

Piracy and Changing Ethical Dilemmas in Technology

In some cases, evolution in information technology have a way of removing ethical dilemmas business owners and IT managers faced just a few years earlier. A case in point is software piracy. Worldwide, piracy is still an issue, with 37 percent of software on personal computers being unlicensed, according to the Forrester Group's 2018 BSA Global Software Survey. However, it has become much less of an issue for businesses. Because malware from pirated software costs companies nearly $359 billion a year, it makes sense financially to use licensed software. In fact, with proper software management, companies can increase profits by as much as 11 percent per year.

Data Protection and Privacy

Doing your best to protect customer and employee information from being exposed to the public, or from being hacked, may seem a no-brainer. However, the line can become fuzzier when the question is how much do you spend to ensure digital information is safe from prying eyes. Firewalls, encryption technologies, virtual private networks, or VPNs, as well as hiring security specialists to ensure your data systems are properly configured, can all require significant investments of capital.

According to Forrester's 2018 report in Forbes on ethics and consumer action, 79 percent of U.S. adults use tools to protect their digital privacy and security online. Forrester also anticipates more regulations, like California's Consumer Privacy Act and the GDPR, but also continued consumer push-back against companies that do not protect data or use data responsibly.

Ransoms and Ransomware

In recent years, the ethical problems in information technology have been complicated even further with the rise of ransomware attacks. Hackers infiltrate a computer network, take control of it and then demand payment for a code that will release it. If you don't pay the ransom, you may lose all of the data stored on your network. Even if you have the data backed up, the time – and expense – of restoring your network may be more than the cost of paying the ransom. Business owners and IT managers who pay the ransom do so knowing that it will encourage the hackers to do the same thing to another organization.

In 2016, the ride-sharing service Uber paid a $100,000 ransom to hackers who had accessed the personal data of 57 million people, including information about Uber drivers and their customers. The ethical and legal dilemma the company skirted was whether or not to tell the public what had happened. It wasn't until a change in management in 2017 that the ransom payment was revealed. The result was a congressional hearing and a record-breaking fine of $148 million.

Ethics and Artificial Intelligence

Each year, as advances are made in artificial intelligence, or AI, businesses that use these technologies will be facing new ethical dilemmas. For example, if you decide to use a chatbot on your website to assist customers, not only do you have to decide what information you will be collecting from those customers and how it will be used, you will also have to decide whether or not to tell your customers that they are interacting with a program rather than a human being.

In other cases, the dilemmas surrounding AI revolve around how it is programmed. Human preferences and even prejudices can affect how the software behaves. In one instance, an AI tool used by the Wisconsin Department of Corrections to help determine parole eligibility of inmates showed a distinct preference for Caucasian men over African-American and Hispanic men. The prejudice was written into the software by the programmers.

Perhaps the ultimate in ethical dilemmas can be found in how to program self-driving cars. In the event of a potential collision, the programmers who design the software must decide who to save. Mercedes-Benz made headlines in 2016, when it opted to always protect the driver first in its AI prototypes – even if that meant plowing through a group of pedestrians, instead of steering toward an oncoming truck.