## The Good and The Bad of Information Systems and Technology

### *The Future of Information Systems*

As companies reduce costs and improve productivity, employers look for information systems and technology for their continued global growth and competitiveness.

Here are some of the future projections in information systems and technology:

1. **Reduced cost:** Continuous decline in hardware and software costs will make information processes affordable regardless of the company's size and financial status.

2. **Advanced AI**: Continuous improvement and expansion of artificial intelligence will profoundly impact information systems.

   For example, developments in natural language processing would make information systems easier to utilize. According to Gartner Group, robots will play a significant role in the workforce as they will supervise one of three jobs by 2025.

3. **Network Technology Improvements:** Developments in networking technology will make computer connections easier while sending information from one location to another faster.

   Benefits include a manageable network compatibility issue and improving communication quality and information delivery through voice and image integration on the same transmission medium.

4. **Internet Growth:** Internet growth will continue, putting small and large organizations in the same standing regardless of financial status. It will also allow an easier e-collaboration between users despite geographical distances.

5. **Easier Compatibility:** Improvements in power and quality of personal computers and mobile devices will enable information system software to run on them without issues, making information systems affordable, easier to maintain, and appealing to organizations.

### *Trends in Information Systems*

Information systems have been rapidly evolving since their introduction in the 1950s. The Internet has made the world accessible, allowing communication and collaboration.

Here are the current trends in information systems:

#### Personal

Since Web 2.0 refers to today's interactive Internet and e-commerce, users have expected to modify their online experiences to meet their personal preferences. Digital device creators ensure to provide user personalization, from custom backgrounds on desktops to decorative keypads on smartphones.

Netflix is a prime example of this as they feed their users recommendations tailored to their viewing history and preferences. Additionally, devices that perfectly match personal preferences based on collected information will become the norm.

#### Wearable

Several smartphone functions, such as messaging, phone calls, and social media, would be better if they were easily worn onto people's bodies. It is called "*wearable,*" with products such as Apple Watch and Huawei Wearables as examples.

Wearables have existed before in the form of hearing aids and Bluetooth earpieces. Recently, it has expanded to include smartwatches, body cameras, and various fitness monitors.

**Printable**

One of the most impressive recent innovations is the 3D printer. It allows the virtual printing of any 3D object based on an object model designed on a computer. It comprises layers of malleable materials, such as glass, metals, or wax.

3D printing is useful for prototyping product designs to determine their feasibility and marketability. It has also been used for prosthetic legs and earpieces that can hear beyond the normal hearing range.

**Autonomous**

Devices that operate themselves to perform specific functions are developed through the combination of software, sensors, and location technologies. The output varies from medical nanotechnology robots (nanobots) to unmanned aerial vehicles (UAVs).

A nanobot is a robot whose components scale to about a nanometer, which is one-billionth of a meter. While still an emerging technology, its promises for medical applications are hopeful. For example, nanobots could be introduced to the human body to fight cancer or specific diseases.

A UAV often called a "*drone*," is a small airplane or helicopter that takes flight without a pilot. Instead, they are either run by computers autonomously or by using a remote control. While most drones are used for military or civil applications, the market for personal drones is showing great signs for its future.

## *The Adverse Effects*

Given the broad scope of information systems and their application, here are some of the adverse effects of information systems and technology.

1. **Lack of Job Security**

With information systems and technology in place, companies compete to retain their edge against other companies by automating several business processes resulting in layoffs from the workforce. Companies can now simplify business processes, store data as digital files, and even process them instantaneously.

Essentially tasks carried out by the workforce are now being handled by much more advanced computers.

One way to avoid being laid off is by building an advanced and impressive skill set and qualities that robots cannot replace, such as the following:

- **Emotional Intelligence** deals with the proper management and expression of emotions as well as the emotions of others.

  Although robots that use artificial intelligence to read social cues and detect emotions are being developed, replacing humans would be difficult as robots would not reach the complexities of human emotions. Robots might register emotions but building relationships and showing empathy is not guaranteed.

- **Creative Problem Solving**: As robots do not understand human psychology as humans can, creative problem-solving, like what product designers, advertisers, and marketers do, is unlikely, as it also means resolving employee conflict, meeting a client's goals, or adjusting to internal workflow processes.

2. **Cost**

Companies spend millions to integrate information systems that are either purchased or newly leased hardware and software with the rest of their existing architecture. These also include training employees to operate these systems efficiently. These factors can translate to hefty initial expenses.

Cost-effectiveness is key to avoiding this problem. Cost-cutting is an effective tool that decreases a company's expenses and maximizes profits. It identifies and removes expenditure that adds no value to customers while optimizing processes to improve efficiency.

3. **Security Issues**

With the increase in cyber threats over the years, various security issues are bound to happen to anyone.

Once the integration of the information system is complete, safety measures such as solid firewalls and encryption must be taken into consideration. Without a strong firewall, client information, bank details, and other confidential information are at risk of being compromised.

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