

Chapter 1 Information Technology and Its Role in the Modern Organization

Chapter Objectives

This chapter will discuss:

- The role information technology plays in an organization going about its daily business,
- The three basic employee types as referred to in the book: Managers, Technical Workers (IT specialists) and Non-Technical Workers,
- The role policies play in communicating an organization's priorities to its employees,
- Examples of incidents that have brought security and accountability to the fore, and
- The book's organization.

1.1 Information Technology's Role in an Organization's Processes

Over the past few decades information technology's (IT) ability to facilitate an organization's business processes has increased dramatically. From "electrifying" regular office tasks such as correspondence and allowing for storing the product virtually to Enterprise Resource Planning (ERP) and the newly emerging Service Oriented Architectures (SOAs), business is becoming more and more dependent on IT. It is critical for an organization to implement IT in a way that maximizes its benefit, but it is just as important that a regime of policies protecting the "corporate knowledge" be put in place to ensure that knowledge isn't stolen by outsiders.

In the past, computer and network security was the domain of the technical "folks in the lab". Executives and general employees did not know nor likely did they care what the network security people did to secure the company's systems as long as nothing was broken into and there was negligible downtime. Over the years, however, myriad factors have emerged

to threaten a company's stability through compromising security. Stealing trade secrets and proprietary data are two examples of critical damage that can be inflicted upon a company when security is breeched. Because many companies are interconnected with geographically distant sites as well as partner firms, and allow their employees to access internal systems from mobile devices such as laptops and Personal Digital Assistants (PDAs), there are ample targets for a potential intruder to select from when planning an attack. Unfortunately, simply guarding one's borders from outside intrusions is not enough today, as a substantial proportion of security violations are committed by someone within the victimized organization itself.

1.1.1 Cats and Dogs (Technical Workers and Management)

Technical workers and management tend to have one thing in common: they don't appreciate the constraints the other works within when going about their jobs. Management criticizes the system administrators for not understanding how the best technical solution isn't appropriate for meeting the company's goals, while the system administrators criticize management for not understanding that what they're asking for is impossible, overly expensive or foolhardy. While some counter-examples do exist in the IT world, quite often those in charge of running a business or governmental organization are professional managers rather than professional technologists with managerial training. Most of the time, those charged with constructing and implementing the technical architecture do not understand the business environment in which their organization is operating. After all, their job is to simply build what they're told to build, so what difference does it make if they understand the business context or not?

The above situation manifests itself in which courses in the required "core curriculum" we hated to take. If one couldn't stand the required public speaking or history classes because they got in the way of time spent in front of a computer, chances are there is no real understanding of the overarching mission of the organization. If calculus nearly ended a college career, in contrast, that person is not as likely to have a solid grounding in the technical aspects of how IT enables the organization's functions. Readers of this book will have a better understanding of how both areas come together to form a technical and policy regime to best serve the interests of the organization through the best possible mix of maximizing technical solutions while conforming to government and organizational requirements. Ultimately, this book's aim is to educate readers from both the technical and management communities. To an IT pro-