Chapter 9
Strategic Data and Cyber Security Management in the Arab World:
Running Successful Lives and Businesses During the Data Tsunami Era

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ABSTRACT

In this chapter, the author will discuss the human life transformation during the last 100 years, moving from the transmission of a message through pigeons and going forward to living a digitalized way of life that could be described as a life where human interaction and communication is taking place predominantly through devices. The chapter will discuss technological advancements such as automation, digitalization, digital transformation, data science, data analytics, real-time data acquisition, artificial intelligence, and predictive intelligence and how all these aspects are affecting the lives of people in the Arab world. The author will discuss how today's people are living within an interconnected world where humans and devices are communicating through the world wide web (the internet). Then, the author will discuss the cyber challenges and how businesses and humans can utilize these technology advancements in a safe and secure way.

INTRODUCTION

The last 100 of years witnessed the utilization of a number of history rudiments that shaped our future technology and technological life. Those include mechanics, electricity, electronics, advanced computing and computer networks. Those technology advancements that paved the way for the advanced communication.

Furthermore, the advancements in integrated electrical circuits led to the fact that the basic cell phone that we carry today in our hands is much more powerful than the computer that was used to launch the

first satellite to its orbit in the sky. The power of those small devices is far beyond what the normal user of those devices could imagine. Indeed, it is an advanced computer that you carry in your hand.

Today we live the era of data Tsunami. Data communication is as vital to our life-style as water is importance to our bodies, and there is no doubt that Technology has been a pulse-pounding carrier throughout this era. As shown in Figure 1 the recent statistics show that the average number of connected devices per person around the world in 2015 was around 2.5, and will reach to 6.5 by 2020 (Statista, 2018a). [3]
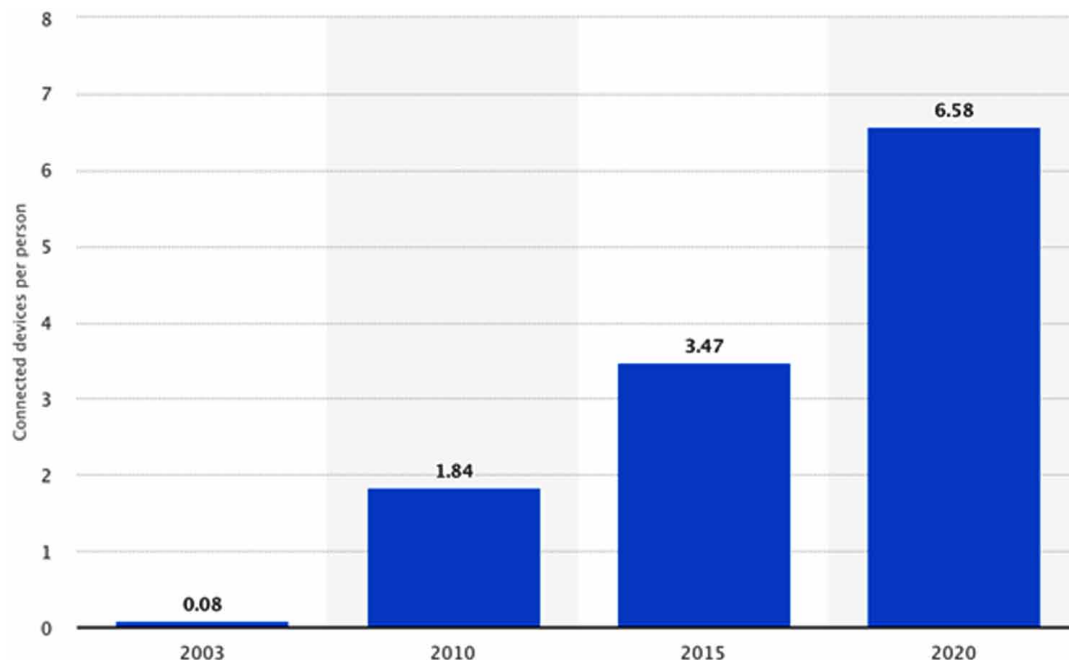
Cities such as Dubai and Abu Dhabi are getting more and more into being smart cities due to different factors that were all based on the Data & Data Utilization factors in order to reach to a better decision making, reduce the carbon footprint.

The aspects of technology advancements in the Arab world businesses including oil & gas, power generation, transmission and distribution and getting into smart electricity grids, moving to becoming smart cities, and a final touch on smart education.

Data science is a mechanism to enable countries to improve all of their life aspects. The author will give few examples about how data science and predictive intelligence were used to help predict accidents and provide recommendations on how to reduce such accidents to as minimum as possible through implementing mitigations that were based on the data correlation and analysis.

Finally, the chapter will cover the cyber challenge and how to maintain a secure life and environment while living in this interconnected world and the author will provide recommendations into how to reduce the cyber threat and impact through developing mature way of life, practices, techniques that would leverage the level of cyber security while still enable business to utilize the technology advancements.

Figure 1. Number of network connected devices per person around the world from 2003 to 2020
Source: (Statista, 2018a)

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