Chapter 6
Application of SMAC Technology

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ABSTRACT

The current digital age is primarily driven by four technology forces namely, Social Media, Mobility, Analytics and Cloud computing. These technologies continue to evolve and shape the digital world, giving people and businesses newer experiences and opportunities that they were not exposed to in the past. Digital technology has the potential to change the world significantly which in turn has a disruptive impact in the world of business. Hence, 'digitizing' its business must be one of top priorities in the medium and long term of every business to ensure a successful future. This chapter begins with by defining each of the four technologies, its benefits and what it means to the key stakeholders in the healthcare business. It also covers many use cases of SMAC with a specific focus on clinical development and pharmacovigilance. The later part of the chapter lays the foundation for setting up a SMAC organization including key strategies, conceptual framework, technology and regulatory compliance considerations.

INTRODUCTION

In the past several decades, Information Technology has played a vital role in defining the growth of enterprises. From a support function, IT has quickly emerged as a function that enables enterprises to create a far more business value in the marketplace within a short timeframe that ever before. In the present era called the "digital age", technology that was once more confined within enterprises for back-end processing of information has crossed boundaries and has been transforming our day-to-day lives.

Social media, Mobility, Analytics and Cloud, widely known by its acronym –SMAC, are the four main sources of technology that is driving this revolutionary change across the business value chain, from customers to enterprises. It is very important for enterprises to be agile and ride on this new wave of digital shift to remain successful and relevant in the marketplace. Pharma industry has been a late adopter of technology when compared to industries such as financial services, automobile and telecom-

DOI: 10.4018/978-1-5225-3926-1.ch006

munications. However, with consumers (patients in the case of pharma and healthcare industry) having fully on boarded onto the SMAC bandwagon, it opens up new avenues for Pharma industry to understand and improve patient care and patient safety.

DEFINING S-M-A-C

This section introduces the basic concepts and types of each of the four technologies – social media, mobility, analytics and cloud computing. It will serve as the basis for the rest of the sections in this chapter which deals with application and implementation of the SMAC technology in the Life Sciences context.

Social Media

In the past few years, the term 'social media' has become ubiquitous in the world of digital media and internet. The major reason behind its success has been the rise of websites such as MySpace, Facebook, Twitter and so on. Many still consider social media to be confined with such networking sites. However, the term Social Media covers a much broader spectrum of which social networking sites are a part of.

Social Media is a virtual medium of communication through which users come together to access information, interact and connect with other users and share their information and opinions. Social media has enabled more interaction among people who are virtually connected based on their interests or background. For instance, people who have interests in wildlife photography get connected through sites such as wildlife photographic blog or naturephotohub.com to share their photos, experience and express their opinions about other posts. They may also comment and share photos or videos of wild animals shared through media sharing sites such as YouTube and Flickr. Or friends who have studied in the same school/ college or colleagues who have worked in the same organization network among one another through networking sites such as Facebook, LinkedIn. In the case of patients suffering from life threatening diseases such as cancer, AIDS, sites such as cancer.org, HIVAidsTribe.com provides them the much needed support, medical information to tackle various health related situations and opportunities to connect with other patients suffering from similar ailments. Social media has gained much popularity in the digital world since it is open to all and offers the freedom to express and promote themselves or their interests to a wider audience.

There are several tools and mediums under the realm of social media. This includes social networking sites, blogs, discussion forums, social news sites, media sharing sites, micro blogs, bookmarking sites and gamification. Table 1 provides a brief description of each type of social media tool and few popular examples existing today.

Mobility

The term 'Mobility' as per Oxford Dictionary means the ability to move or be moved freely and easily. In the technology context, mobility is the medium through which digital technology can be easily accessed on the move. Devices that enable technology to be portable and accessible are called mobile devices. Mobile devices are small lightweight handheld computing device which allows users to perform most of the activities that could be done with PCs or laptops. Mobile devices include smartphones, tablets and