

Chapter 9

A Framework for Analyzing the Impact of Data Analytics and the Internet of Things on Digital Marketing

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ABSTRACT

The proliferation of the internet of things will open up new opportunities for implementing the digital transformation of businesses. Available data is expected to rise in unprecedented levels of quantity with the IoT playing an important role towards that end. Data analytics techniques will provide businesses with refined pieces of information in almost all aspects in both B2C and B2B context, thus refining services design and customization with more flexibility and options that focus right at the heart of consumers' needs. Digital marketing depends on these developments. This chapter aims at proposing a framework for analyzing the implications of data analytics and IoT on digital marketing.

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INTRODUCTION

Customers are increasingly using digital media to communicate and interact with companies. Most of such interactions take place on the Web, thus generating vast amounts of data, which analysis reveals valuable insights pertaining to customer preferences, behaviour patterns, etc. As a result, companies have already started showing interest in Web analytics, in order to understand online customers' behaviour, preferences and improve their experience, while getting insights on how to increase business revenues (Chaffey, & Patron, 2012). Web Analytics are used by more than 60% of the top 10 million most popular websites around the world (Web Technology Surveys, 2014). Digital marketing is a strategy to promote products and brands through the internet or digital media. It helps in developing and maintaining customer relationships through online activities. There are a number of tools that can be used such as Customer Relationship Management (CRM), social CRM, email software, e-commerce software, marketing automation software and Web analytics (TechNavio, 2017). The Digital Marketing Institute (DMI) refers to digital marketing as "The use of digital technologies to create an integrated, targeted and measurable communication which helps to acquire and retain customers while building deeper relationships with them" (Royle, & Laing, 2014). The importance of Digital Marketing is already been confirmed in a study by IBM consisting of interviews with CMOs (IBM Institute for Business Value, 2011). These CMOs highlighted the following four biggest challenges: (1) explosion of data (i.e. big data), (2) social media, (3) proliferation of channels, and (4) shifting consumer demographics. Customer behaviour changes and technological developments, justify the IBM study. The computer screen has obviously been the most popular display of Web content, but things have changed. Recent market statistics show the dramatic proliferation of smartphones since 2005, and the profound customers' shift towards mobile marketing. Indeed, more than 50% of searches are carried out on mobile, 91% of Facebook usage, Daily Active users, is on mobile, 80% of Facebook advertising revenue is on mobile, 90% of mobile media time is spent in mobile apps (Digital marketing Megatrends, 2017).

Now, data analytics techniques can be, more than ever, used to analyse the masses of data that users generate on the Web. The proliferation of devices such as computers, laptops, smart TVs and smartphones established new communication channels between customers and businesses. In the coming years the proliferation of the Internet of Things (IoT) is expected to further expand the number of ways that companies contact customers and vice versa. Therefore, consumers navigate and proceed to purchases on the Internet through various channels, revealing their preferences. They write reviews and share their experiences with other consumers,

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