

## THE CONCEPT OF CLOUD MARKETING

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**Abstract:** *Industry 4.0 can be interpreted as a business discipline that has led to the automation and digitalization of business systems thanks to Internet of Things, Cyber Physical Systems, Cognitive computing, but also Cloud computing that is crucial to the continuous development of Industry 4.0, because Cloud-based technology connects and centralizes information essential for business, and in addition provides an open source platform that improves research for the entire industry. In order to meet customer needs, different industrial branches apply Cloud computing which allows companies to adapt more easily to ongoing technological innovations. Cloud computing with unlimited networking capabilities enables businesses to optimize their business processes and activate their applications, which provide them with data necessary for business analytics. Additionally, thanks to innovative applications on the Cloud platform, personal adaptation to the individual needs of users is made. All of this has also affected the emergence of Cloud-based marketing, which implies the activity of organizations focused on the digital delivery of products and services tailored to users' individual needs. This paper analyzes the concept of Cloud marketing and defines Cloud marketing platforms that contribute to the optimization of*

*marketing strategies, and the increase in return on investment.*

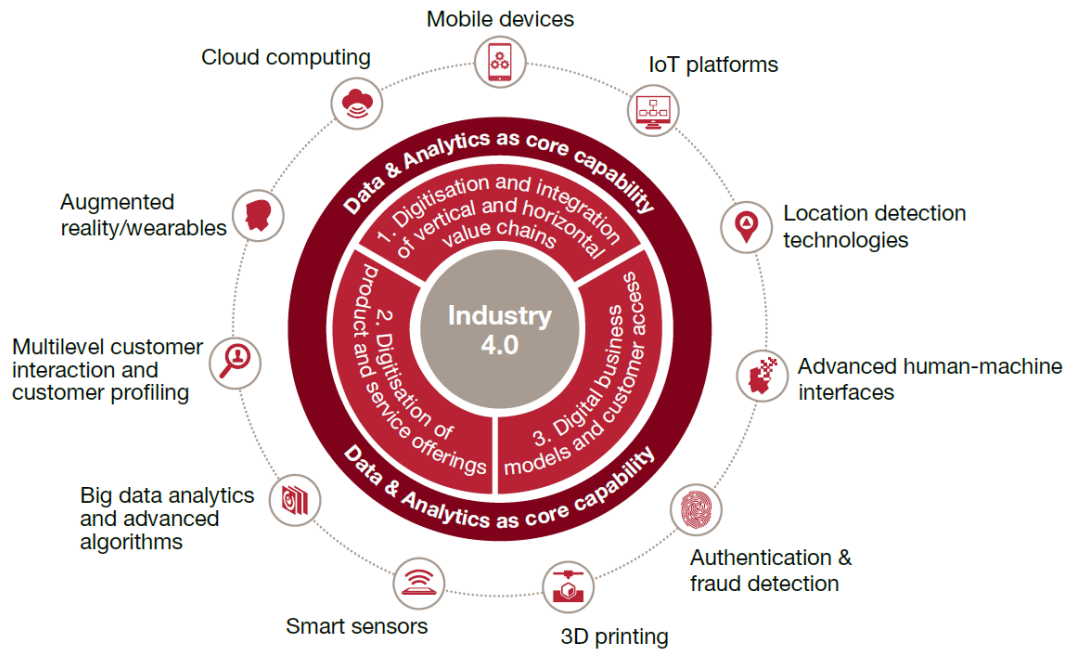
**Key words:** *Cloud marketing, Industry 4.0, ICT, marketing Cloud platforms*

### 1. INTRODUCTION

Every industrial revolution had been the result of technological progress. Today we are witnessing the fourth industrial revolution – Industry 4.0, which anticipated outcomes are productivity and economic growth higher than ever, and advanced welfare (Morrar, Arman, and Mousa, 2017).

Internet of Things (IoT), Cyber Physical Systems (CPS), Robotics, 3D printing, Big data, Cognitive computing, Cloud computing and Augmented reality are the principal drivers of an Industry 4.0. (Fig. 1). Networking a wide range of novel technologies in a fourth industrial revolution has created the opportunities that past revolutions could not, hence greatly influencing the way of living and behavior of both individuals and organizations. Industry 4.0 innovations are accessible to low and medium enterprises as same as to large organizations (World Economic Forum, 2019).

**Figure 1.** The fourth industrial revolution – Industry 4.0



*Source: PwC (2016)*

In the marketing domain, the early and full adoption of technology will result in connected, transparent, optimized, proactive, and agile marketing campaigns. Industry 4.0 allows marketers to communicate with each consumer, get information about consumer habits, preferences, needs, and desires, and create consumer-tailored campaigns. In other words, modern marketing approaches are established on data collected through various means from different sources. The escalating number of IoT devices produces data described with 5 V's: volume, velocity, variety, value, and veracity. The collection, processing, and analyzing IoT-produced data, and making the right decisions are the main challenges for marketers. Cloud computing plays a key role in dealing with the escalating volume of fast-generated heterogeneous IoT data and knowledge extraction. Cloud computing provides the means through which everything can be delivered as a service in any time at any place (Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS)). The symbiosis of Cloud computing and marketing has created a Cloud marketing - a new term that describes the business's marketing efforts implemented via search engines, blogs, digital ads, and e-mail. Cloud marketing with the help of Industry 4.0 becomes timely and personalized marketing approach. Development and delivery of personalized marketing messages increase the satisfaction of consumers, sales and profits.

Having in mind that key technological developments in Industry 4.0 lead to fully connected, intelligent and innovation-based economy it is clear that the adoption of the Industry 4.0 becomes essential in order to stay competitive in a globalized environment (Nagy, Oláh, Erdei, Máté, and Popp, 2018). Cloud computing plays a key role in the delivery of immense changes in industries, markets, and business processes. Therefore, this paper tries to help in understanding the symbiotic relationship between Cloud computing and marketing domain, and their contributions in creating new marketing dimension, known as Cloud marketing.

## 2. CLOUD COMPUTING - BASICS

There is no doubt that the widespread adoption of Industry 4.0, will increase productivity and bring numerous socioeconomic benefits (Morrar et al., 2017; World Economic Forum, 2019). One of the technologies that is a key driver of the fourth industrial revolution is Cloud computing. Cloud computing means the delivery of software, infrastructure and storage services over the Internet (Watts, 2016; Harris, n.d.; ICT Qatar, n.d.):

- Software as a Service (SaaS) – software distribution model in which service provider hosts the software and end-user can use it over the Internet, without the need to install the software.

- Platform as a Service (PaaS) – delivery of a platform for software creation to the end-user over the Internet.
- Infrastructure as a Service (IaaS) – on-demand and as-needed renting a highly scalable and automated compute resources.

Whether there is a need for Cloud-based software, a smooth platform for the creation of customized applications, or complete control over entire

infrastructure, Cloud computing solutions simplify the manner in which business operates (Watts, 2016). The main benefits Cloud computing brings are: reduced costs, increased storage, flexibility, work from anywhere at whatever time, increased collaboration, security, environmentally friendly, and so on (Fig. 2.) Due to all these benefits, it is evident that migration to the Cloud is the future of the business.

**Figure 2.** Cloud computing benefits



*Source: Authors*

### 3. CLOUD MARKETING

The main benefits Cloud computing brings are easier access to a variety of data, powerful data analysis, predictive actions, and intelligent decision making. Increased usage of the Internet-connected devices and currently available technologies have enabled companies easier collection of data about current and potential

customers and easier ways to reach them. In other words, marketing in the Cloud changes the company's way of collection, storage, and utilization of a variety of data and interaction with the customers (Figone, n.d.). Cloud marketing is customary marketing combined with SaaS, and includes data services, automation, targeting, and content (Pat Research, n.d.). With the help of Cloud-based digital marketing platforms, marketers can track their campaigns and efforts in

real-time and approach to customers via digital channels (web, mobile, e-mail, social media) (Fig. 3). Using Cloud tools and data about consumer's habits, need, and preferences, marketers can optimize marketing strategies through the

development of personalized and targeted marketing messages. In this way, marketing and sale of products and services are completely changed, while consumer engagement and satisfaction increases (Figone, n.d.).

**Figure 3.** Cloud marketing



*Source: (RSystems, n.d.).*

Benefits of Cloud marketing (Fig. 3) are (Marketing Schools, n.d.; Lad, 2016):

- Reduced marketing costs – With digital formats and channels, printing costs, advertising time costs, and company-customer communication costs are significantly decreased.
- Less wasted marketing materials – When a marketing campaign is over, it is easily erased from the Internet.
- Ease of implementation – Cloud marketing programming in a SaaS model requires only an Internet connection.
- Increased customization – Web-based interactive mediums enable more relevant, focused and effective advertising.
- Increased mobility and efficiency – Placing marketing resources in the Cloud enable access anytime and anywhere.

Cloud marketing automates time-consuming tasks.

Adobe Marketing Cloud, Salesforce Marketing Cloud, Oracle Marketing Cloud, Nielsen Marketing Cloud, IBM Interactive Marketing Solution, HP Marketing Optimization, FICO Analytic Cloud, Hubspot, Message Cloud, AgilOne Predictive Marketing Cloud, Marketo Engagement Marketing Platform, and Teradata Marketing are some of the top Cloud marketing platforms (Pat Research, n.d.).

Three best Cloud marketing platforms are:

- Adobe Marketing Cloud - is an all-in-one marketing solution that includes: Adobe Analytics, Adobe Audience Manager, Adobe Campaign, Adobe Experience Manager, Adobe Media Optimizer, Adobe Primetime, Adobe Social and Adobe Target (Fig. 4). The key features of Adobe Marketing Cloud are: marketing

automation, A/B testing, real-time digital analytics, and social insights. Hence, Adobe Marketing Cloud platform enables enterprises and small to large-sized firms better understanding of customers,

management, orchestration, personalization and optimization of cross-channel campaigns (Better Buys Staff, 2018).

**Figure 4.** Adobe Marketing Cloud

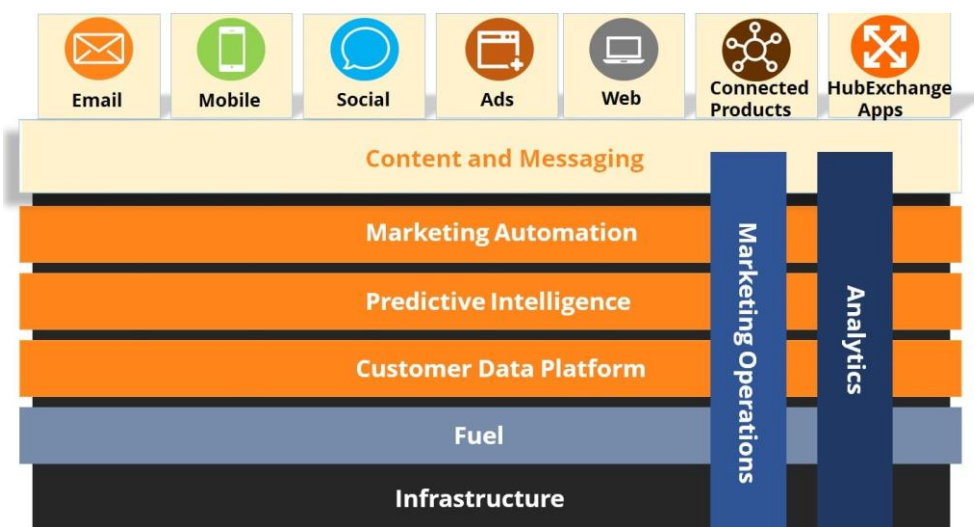


*Source: (Singh, 2017)*

- Salesforce Marketing Cloud – provides companies different functionalities such as journey builder, contact management tools, content management tools, analytics builder and various channels like e-mail and mobile. In other words, this Cloud marketing platform enables marketers to deliver the right offer to the right customers at the right time via the right channel (through any device on any channel from the web, email, mobile, social networks, and ads). The Salesforce

Marketing Cloud is built on Salesforce infrastructure and on Fuel platform, and consists of various platforms: Customer Data platform (for storing customer’s data), a Predictive Intelligence platform (for building predictive models of 1-to-1 customer’s journey), Marketing Automation, Content and Messaging platform, Analytics, and Marketing Operations (Fig. 5) (ABSI, n.d.; Edureka, 2019).

**Figure 5.** Salesforce Marketing Cloud



*Source: (Edureka, 2019)*

- Oracle Marketing Cloud – enables the delivery of the personalized, relevant, and timely customer experiences via every channel and at any time and in any place. Hence, this Cloud marketing platform enables significant influence on customers, making a strong relationship and customer loyalty. Oracle Marketing Cloud combines Oracle BlueKai (data

management and actionable insights), Oracle Content Marketing, Oracle Eloqua (marketing automation and personalized campaigns) and Oracle Responsys (cross-channel customer experiences) with Oracle Social Cloud (Fig. 6). (Pat Research, n.d.; Oracle, n.d., Cox, 2016).

**Figure 6.** Oracle Marketing Cloud



*Source: (Cox, 2016)*

In the era of advanced technologies, it is inevitable for businesses to move towards Cloud marketing platforms and tools. With Cloud marketing, companies better understand the customers' needs, create targeted and personalized marketing campaigns and reach customers across any device and any channel at any time. With higher customer engagement, satisfaction, and loyalty, companies boost their Return on Investment (ROI).

## CONCLUSION

One of the key drivers of the development of Industry 4.0 is computing in the Cloud which advantages consist of simplicity, reachability, flexibility, scalability, network security, and reduced costs. As such, Cloud-enabled technologies enable the centralization and union of business-important data and enterprises' adaption to technology-driven changes. In other words, Cloud platforms enable optimization of business processes through the storing of data, networking, analysis and running own applications. Cloud technologies have also influenced marketing, and therefore Cloud marketing has emerged, which is defined as a set of marketing efforts implemented through online channels. More precisely, Cloud marketing is suitable for all industries, allows the companies to connect with certified clients via

online tools, and it can be used alone or in combination with traditional forms of communication. With the technology progress, there is no doubt that the growth and importance of Cloud marketing will be greater. Coordination of marketing activities in the Cloud is simplified thanks to Cloud marketing platforms. These platforms enable the easier collection of customer-related data, their analysis and predictive analytics followed with the personalized promotional activities. Knowing more about current and potential customers, companies can make smarter business decisions, that will result in increased profit and satisfied customers. This paper presents three of the most famous Cloud marketing platforms, Adobe Marketing Cloud, Salesforce Marketing Cloud, and Oracle Marketing Cloud, in order to present the scope of the marketing activities they involve.

Increased usage of the Internet, and networking users and Cloud tools imply the digital content dominance in the company's marketing strategies. To achieve success, today's marketers should adopt a Cloud-based marketing concept, as it will be able to increase the loyalty of current customers and attract more customers, increase ROI, simplify marketing activities' optimization and better positioning of their brand in the market.

## REFERENCES

- [1] ABSI (n.d.). *Salesforce Marketing Cloud*. [Online]: <https://www.absi.digital/en/solutions/salesforce/marketing-cloud>
- [2] Better Buys Staff (2018). *Adobe Marketing Cloud Review*. [Online]: <https://www.betterbuys.com/marketing-automation/reviews/adobe-marketing-cloud/>
- [3] Cox, T. (2016). *Oracle Marketing Cloud*. Marketing Cube. [Online]: <https://marketingcube.com.au/>
- [4] Edureka (2019). *Salesforce Marketing Cloud: A Powerful Marketing Platform*. [Online]: <https://www.edureka.co/blog/salesforce-marketing-cloud/>
- [5] Figone, S. (n.d.). *The Path to Success: Cloud-Based Digital Marketing*. [Online]: <https://rapidscale.net/cloud-based-digital-marketing/>
- [6] Harris, T. (n.d.). *CLOUD COMPUTING—An Overview*. [Online]: <https://www.thbs.com/downloads/Cloud-Computing-Overview.pdf>
- [7] ICT Qatar (n.d.). *Cloud computing guidelines*. [Online]: [http://www.motc.gov.qa/sites/default/files/cloud\\_computing\\_ebook.pdf](http://www.motc.gov.qa/sites/default/files/cloud_computing_ebook.pdf)
- [8] Lad, N. (2016). *What is Marketing Cloud?* [Online]: <https://www.esds.co.in/blog/what-is-marketing-cloud/#sthash.45EgJEOL.yX08TJNf.dpbs>
- [9] Marketing Schools (n.d.). *Cloud Marketing*. [Online]: <http://www.marketing-schools.org/types-of-marketing/cloud-marketing.html>
- [10] Morrar, R., Arman, H., and Mousa, S. (2017). *The Fourth Industrial Revolution (Industry 4.0): A Social Innovation Perspective*. *Technology Innovation Management Review*, 7(11): 12–20. <http://doi.org/10.22215/timreview/1117>
- [11] Nagy, J., Oláh, J., Erdei, E., Máté, D. and Popp, J. (2018). *The Role and Impact of Industry 4.0 and the Internet of Things on the Business Strategy of the Value Chain—The Case of Hungary*. *Sustainability* 10, 3491; doi:10.3390/su10103491
- [12] Oracle (n.d.). *Oracle Marketing Cloud Product Overview*. [Online]: <http://www.eplux.com/oracle-marketing-cloud.pdf>
- [13] Pat Research (n.d.). *Top 13 Marketing Cloud platforms*. [Online]: <https://www.predictiveanalyticstoday.com/top-marketing-clouds/>
- [14] PwC (2016). *Industry 4.0: Building the digital enterprise*. *Global Industry 4.0 Survey*
- [15] RSystems (n.d.). *Marketing Cloud*. [Online]: <http://salesforce.rsystems.com/core-salesforce-enterprise-services/#marketing-cloud>
- [16] Singh, P. (2017). *Adobe Marketing Cloud*. [Online]: <https://www.argildx.com/adobe-marketing-cloud/>
- [17] Watts, S. (2016). *SaaS vs PaaS vs IaaS: What's The Difference and How To Choose*. [Online]: <https://www.bmc.com/blogs/saas-vs-paas-vs-iaas-whats-the-difference-and-how-to-choose/>
- [18] World Economic Forum (2019). *Fourth Industrial Revolution - Beacons of Technology and Innovation in Manufacturing*. [Online]: [http://www3.weforum.org/docs/WEF\\_4IR\\_Beacons\\_of\\_Technology\\_and\\_Innovation\\_in\\_Manufacturing\\_report\\_2019.pdf](http://www3.weforum.org/docs/WEF_4IR_Beacons_of_Technology_and_Innovation_in_Manufacturing_report_2019.pdf)

## SUMMARY

This paper analyzes the Fourth Industrial Revolution, and its overall benefits in marketing domain. As industry that uses novel technologies such as Internet of Things (IoT), Cyber Physical Systems (CPS), Robotics, 3D printing, Big data, Cognitive computing, Cloud computing and Augmented reality, Industry 4.0 enables automation and digitalization of business systems. Getting the right information at the right time contribute to the making the right business' decisions, leading to the increased productivity, lower operational costs, enhanced product quality, gaining a competitive advantage and satisfied consumers. Cloud-based technology as a principal driver of Industry 4.0 play a key role in optimizing business processes. Cloud computing advantages (i.e. reduced costs, increased storage, easier access to a variety of data, powerful data analysis, predictive actions, intelligent decision making, flexibility, increased collaboration, security, environmentally friendly, etc.) are highly recognized in many industries, including the advertising and marketing sector. The symbiosis of Cloud computing and marketing have emerged a new term Cloud marketing that encompasses all of a company's online marketing efforts. Cloud marketing brings numerous benefits: savings, the ease and speed of implementation, scalability, reliability, security of data, easy access to resources and a larger audience. Marketing activities coordination in the Cloud is enabled through the Cloud marketing platforms, that enable the faster and easier collection of customer-related data, their analysis and predictive analytics on which basis the personalized promotional activities have been performed. Knowing more about current and possible customers, companies can create smarter business decisions, that will result in increased income and satisfied clients. Movement of the businesses towards Cloud marketing platforms and tools is inevitable in the Fourth Industrial Revolution. Therefore, three of the most famous Cloud marketing platforms, Adobe Marketing Cloud, Salesforce Marketing Cloud, and Oracle Marketing Cloud have been presented in this study.