

## Leverage IoT Technologies for Customer Acquisition and Retention

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### Abstract

The Internet of things is a dynamic network of devices that communicate with each other and provide important data for any business. This communication is established through sensors embedded in devices and objects, which can be anything from your watch to an air pollution monitor. The adoption of IoT technologies can provide companies with opportunities to better understand clients behavior, to increase productivity and reduce costs. The internet of things has changed the way companies interact with clients, allowing marketers to collect more data about their clients preferences and habits. This paper reviews and classify applications of IoT technologies for an effective marketing, attracting new clients and increasing customer engagement.

**Keywords:** the Internet of Things, customer acquisition, customer retention, smart retail.

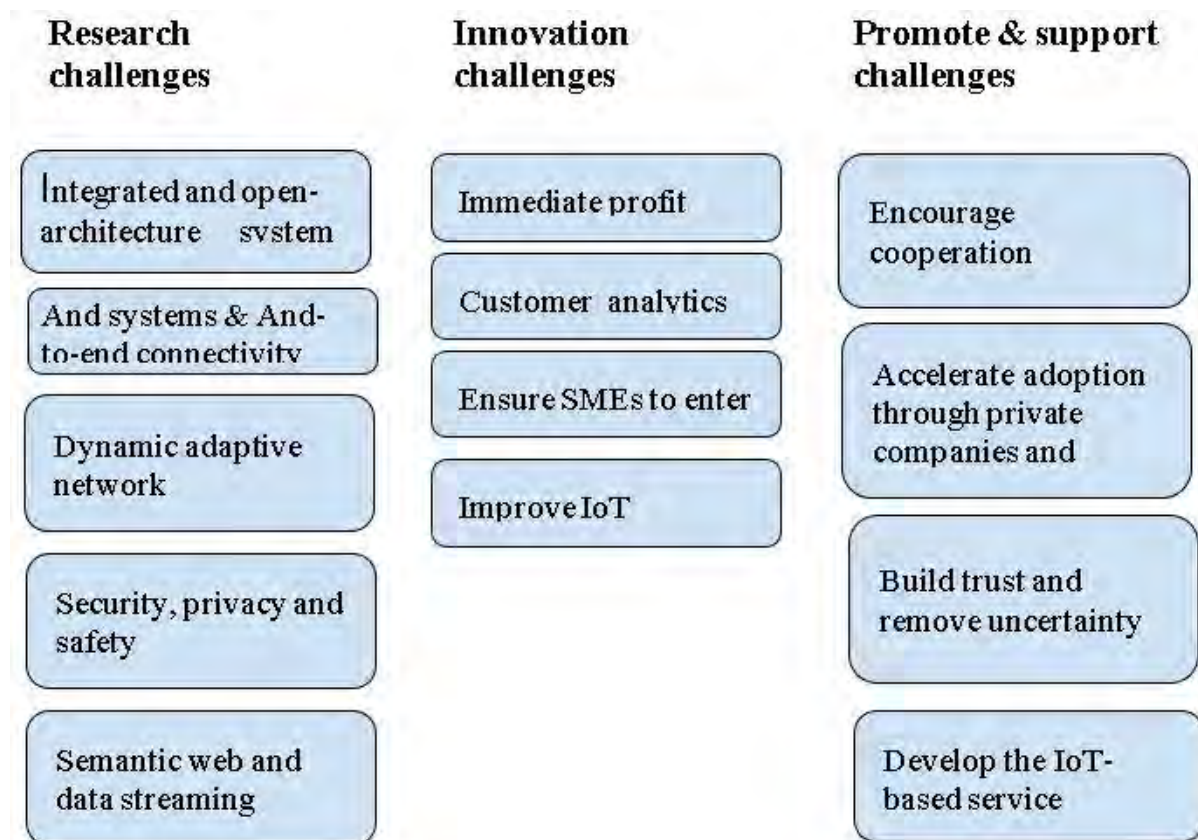
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### 1. Introduction

Since the development of IoT technologies generate competitive advantage for many fields, it started to be applied successfully in marketing strategies also. The interconnected devices increase data flow between customers, and between customers and companies. These networks are more about being social, but they are important sources of data. For ages the marketing customer has been about target audience or customers in general. Now, using IoT technologies companies can focus attention on individuals with their specific habits and behaviors. As well as companies can promote their brands to specific customers by using smart devices. This is generated by the dramatic decrease of sensors price and bandwidth cost, the spread of cellular coverage and the rise of cloud computing. (Minteer, 2017)

According to the European Commission the Internet of Things “represents the next step towards the digitization of our society and economy, where objects and people are interconnected through communication networks and report about their status and/or the surrounding environment”, according to European Commission policies (ec.europa.eu, 2019). Anyway this definition is just an attempt to define the broad field of IoT and its fast development. According to an European Commission study the number of IoT connection within the EU28 will increase from about 1.8 billion in 2013 to almost 6 billion in 2020. Also the IoT revenues will increase from approximately 307 billion EUR in 2013 to more than 1181 billion in 2020 (ec.europa.eu, 2019). The IoT-related researches and innovations support companies to better understand their clients and offer better services and products for specific target markets. Also this enables personalized customer services and provide new marketing opportunities.

There are more framework conditions for the IoT technologies to be used for marketing purposes: research challenges, innovation challenges and promotion and mass adoption through private companies and public sector.

**IoT research and innovation framework for marketing strategy**

*Figure 1: IoT framework conditions for marketing strategy*

Companies from every industry look for comprehensive data. That's why the right solutions for IoT research & innovation challenges will support companies for better results and meeting the objectives. IoT data supply the answer that helps companies to enhance efficiency of marketing plan, sharpen execution and retain customers. There are many ways IoT devices and data can be used, we should consider ethical issues and potential for hacking (Hurley, 2019).

## 2. IoT technologies in marketing as competitive advantage

The implementation of IoT is growing very fast as a result of several new developments: computing innovation, storage and analytics; technology costs falling; increased use of mobile devices and cooperation between innovative companies. It is important for marketers to set up what kind of information they need from mobile devices and how to use them in order to grow the business.

There are more ways marketers use IoT technologies:

- a) Getting important data regarding customer's needs, habits and behaviors;
- b) Improving customer engagement;
- c) Getting important data regarding the buying process;
- d) A more efficient customer service.

### a) Getting important data regarding customer's needs and preferences

The major impact of technology on society and individuals can affect any business. That's why brand engagement measures how active users are. Observing and understanding

customers actions enable marketers to use better their marketing strategies. IoT devices could show how users act and react, what the user pays attention to, the purchasing history and specific user's preferences and needs. This integrated knowledge about customer could help companies to fit the products to the needs of individual customers.

The Internet of Things is a powerful tool to identify and predict customer preferences and needs and therefore to close the knowledge gap about individual customers. To understand data about individual customers become crucial for any business today. Retailers use IoT technologies to connect with customers and improve customer experiences. They use it also to pull customers into one of their channels and to attract them with products that have been personalized for customers special needs and preferences.

#### **b) Improving customer engagement**

Marketers are aware that quality connections between brand and customers can be a major source of success and profitability. Engaged customers show greater loyalty to brands. It is very important to understand differentiation between customer attitudes and behavior that go beyond a simple purchase. A purchase behavioral dimension includes preferences, needs, referrals or social media influence. Engagement is a way to generate customers interaction with brands. This is a customer value added to the brand and could influence other potential clients in their acquisition process. Today the relationship with customers is much more dynamic, the reviews have a high influence and customer's engagement has become a critical factor of any business success (Rogers, 2016).

In collaboration with the marketing agency Yolo Digital SRL we observed differentiation between Generation Z behavior and behavior of X and Y Generations. Generation Z being defined by a realistic behavior in a social networks context, in comparison with Generation X being individualistic and competitive in a political transition context. Considering these, marketers should consider the potential of IoT data to generate great flow experiences and provide effective marketing campaigns by using video materials and personalized messages.

Today's customer expects personalized products and services to meet specific needs and preferences and solve his unique issues. Customers demand quality interactions through a variety of communication channels. With IoT technologies marketers could fulfil both, not only establishing strong connection between services and products, customers and processes, but also by providing specific data so that companies can use to meet customer's needs and preferences.

There are a few ways companies could use IoT technologies for improving customer engagement:

- Greater personalization and gradual improvements - using IoT technologies companies get a tremendous volume of data about customers' needs and preferences. Today marketers could better promote their products and services to customers at the exact moment of need. IoT technologies help companies to reduce unnecessary marketing costs, delivering a better advertising ROI.

- Strengthening customer loyalty - IoT technologies allow companies to get real-time data insights about customers, offering specific benefits and rewards. Understanding better customer's needs marketers can offer targeted cross-promotions, getting immediate consumer action and boosting brand loyalty.

- Observe and improve experiences - marketers use IoT technologies to monitor customer experiences and when there is any issue it is fixed. Getting a

bigger volume of data about customers companies could fit better to their expectations and needs.

- Products and services continuously improvement - companies could get valuable insights from customers feedback and deliver personalized and high-performing products and services. Using data from IoT devices companies can update products and services features and better align with customer expectations.

**c) Getting important data regarding the buying process**

IoT technologies provide data for better way-finding and let the consumer know about special offers and discounts. Companies face more challenges when starting to use the IoT technologies: security concerns, implementation difficulties, lack of IoT specialists and data analysis specialists, unclear business benefits or limited internet skills. Despite having these challenges, companies became more comfortable with the fact that a buyer could get important competition data. Buyers get easily data about competition products and services, prices, reliability, location or quality. Marketers and business developers use this fact to increase the buying process transparency and meet customer's expectations.

According to marketing agency Lean Cuza Digital SRL video materials are more effective than pictures in any online marketing campaign. Considering a geolocation application, customers receive notifications on mobile phones when they are close to a specific location. A video spot would have a bigger impact than simple text and could convert a potential customer in a satisfied client. Lean Cuza Digital marketing agency mentioned that there are different ways to attract teenagers clients compared to their parents. The buying process data should be analyzed according to the customers segmentation.

**d) A more efficient customer service**

Many successful companies have superior customer service, re-inventing this service by using technology to deliver innovative service models. The implementation of IoT technologies before and after purchase is very important for the customers satisfaction and for the success of any business. This depends on different departments - business management, IT, engineering and marketing department. Companies are now exploring new IoT technologies and automation as a way to detect and solve issues with low human intervention. The big volume of data about the customers enable marketers to anticipate customer's issues and needs. This will provide faster problem solving and lower costs. The next generation of customer service is about connecting smart products and smart people to provide unique experience, increase loyalty, and attract new customers.

**3. IoT applications and use case scenarios**

Companies, governments, organizations and the individual consumer enjoy the benefits of IoT. The Internet of Things become a source of competitive advantage for companies, so that's why it is necessary to have a long-term strategy for this. There are many IoT applications, every day a new company decides IoT enabled products and services. The foundation for a connected world was born (Greengard, 2015).

**Wearables** - represent one of the earliest industries to use IoT and its applications. Glucose monitoring devices, heart rate monitor or smartwatches and gesture control devices are one of the many IoT applications. Wearables have a high potential among many IoT innovations and attract new customers.



**Smart Home** - the most efficient IoT applications that stand out is the smart home. The number of people searching for smart homes increases every year. Smart homes take care of energy control and reduction, offering comfort when you come home.

**Smart City** - there are various examples from traffic management to waste management and urban security. IoT applications for a Smart City are very popular, offering comfort to citizens and solving issues for people who live in cities.

**Healthcare IoT** - improve how physicians take care of their patients, allowing interactions directly with their doctors. IoT applications in medical field boost patient engagement and satisfaction and open ways for better data analysis, real-time field data, and testing.

**Industrial Internet** - industrial automation and the world of manufacturing have many IoT applications from sensors embedded in industrial machines to reduction of waste and lost time. Using IoT based applications companies become more efficient and create a sustainable advantage to get new clients and retain the existing ones.

**Smart Retail** - many retailers have adopted IoT based solutions, attracting new clients and increase customer's retention. These applications enable companies to reduce waste and energy, to increase purchasing, to improve store operations, enabling inventory management. Smart retail enhances consumer's shopping experiences. A potential application is a geolocation application for people interested in some specific products and services. Geolocation of customer address may help companies to set up a better customer segmentation (Sinha, 2016) This application allows companies to send notifications to interested people, when they are close to their shop.

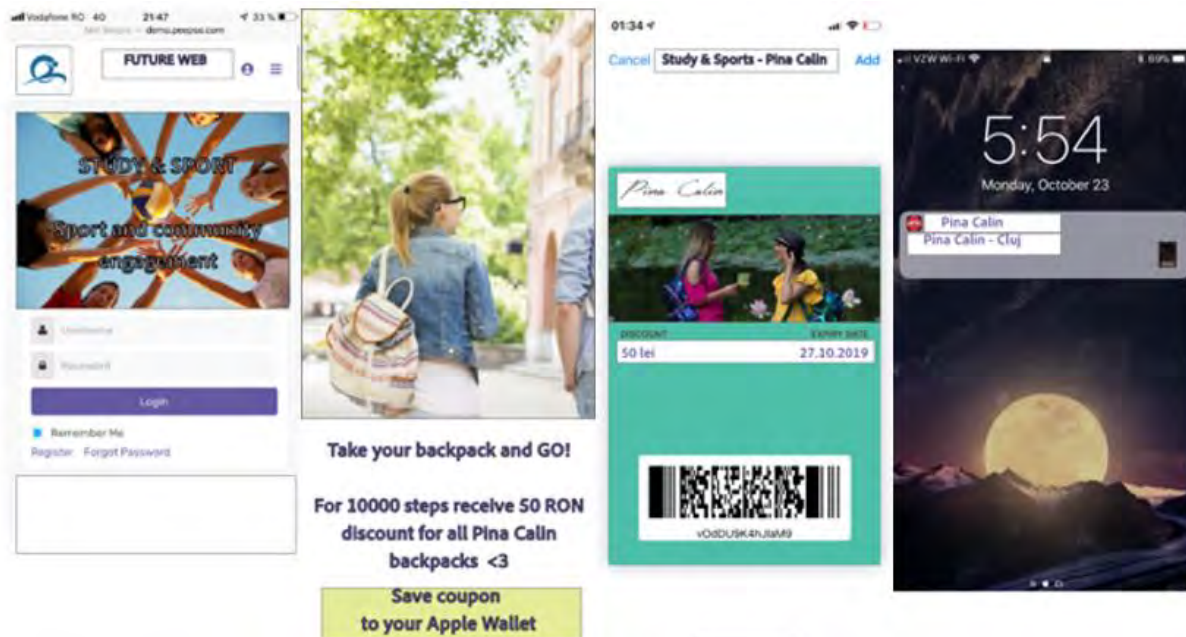


Figure 2 – Geolocation mobile application mockups

**Smart Car** - is a vast network of sensors and software which enables cars to be more safe, comfortable and fast. Companies use smart cars to differentiate from competitors and attract new clients.

**Smart farming** - using IoT technology companies can sense soil moisture and nutrients, improving irrigation system and fertilizer system, in conjunction with weather data. Like that, big farmers could supply good quality products at the right time, to meet clients preferences and needs.

The Internet of Things generates life-changing conditions in our lives. IoT technology greatly increase value and competitiveness of any business. (Sinclair, 2017) Many of the innovations mentioned are already in place for customer acquisition and retention.

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