ISCTE Business School
Instituto Universitário de Lisboa

# HOW TO TURN INNOVATIVE STARTUPS INTO SUCCESSFUL BUSINESSES: THE CASE OF TECHPERKS

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**Techperks: how to turn innovative startups into successful businesses**

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-- *SPINE* --

# Acknowledgements

Because motivation, support and resilience are central when writing a dissertation, it would not be possible to present this study without thanking a group of people who also deserve to be recognized.

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# II. Sumário

A Internet das Coisas, também conhecida pelo acrónimo IoT, compreende todos os dispositivos e objetos que se conectam permanentemente à Internet, e que comunicam entre si. Daí, surgiram cidades inteligentes, fábricas conectadas, carros conectados e um sem número de outras aplicações que nos trazem, todos os dias, novas funcionalidades. Este é um tópico muito relevante e muitos novos modelos de negócios surgem dessa nova tendência, sob forma de novas tecnologias, produtos e serviços. Espera-se que muitos provavelmente tenham sucesso, dado o crescimento desta nova era da tecnologia. No entanto, quando se trata de estratégia de negócios e lucro, não se trata apenas de ter a melhor ideia ou o melhor produto, mas também como comercializá-lo da melhor maneira e atrair o alvo mais atrativo. A startup Techperks foi criada com vista a trazer novos produtos de IoT para Portugal, através da sua revenda. No entanto, o conceito não foi inovador o suficiente para criar sucesso no mercado português e a startup não conseguiu instigar sua visão no mercado. Embora ainda em operação, a loja tem demonstrado resultados aquém das previsões. Este caso, tem como objetivo destacar os principais motivos que explicam o fraca performance da marca e servir como um guia para "os erros a serem evitados ao iniciar um novo negócio retalhista inovador". Além disso, pode ser utilizado para estimular a criatividade dos alunos no desenvolvimento de estratégias que poderiam ter sido usadas pela Techperks para evitar o insucesso e utilizar todo o potencial da marca.

Palavras-chave: Tecnologia, Internet das Coisas, Inovação. Empreendorismo, Estratégia de Negócio, Retalho, Estratégia de Marketing.

JEL Classification System: M31 – Marketing; L81 - Retail and Wholesale Trade • e-Commerce; 031 – Innovation

## Summary

The Internet of Things, also known by the acronym IoT, comprises all devices and objects that are enabled to be permanently connected to the Internet, being able to identify on the network and communicate with each other. This technology is incorporated into a variety of products that are available today and designed to make life easier for consumers. The result was the emergence of smart cities, connected factories, connected cars, and an enormous amount of many other applications. All of this is evidence of how the world is adapting to the Internet of Things (IoT). IoT is a hot topic in our days and many business models arise from this trend, in form of new technologies, products, and services. However, when it comes to business strategy and profitability, it is not only about having the best idea or the best product but how to market it in the best way and attract the right target. Techperks is a startup built with the objective of bringing new IoT products to Portugal. However, the concept was not innovative enough to succeed as predicted in the Portuguese market. This case aims to highlight the biggest reasons explaining the brand's low performance and serve as a guide of "mistakes to avoid when launching a new innovative business". It can also be used to stimulate student's creativity in developing strategies used by Techperks to exploit the brand's total potential. "How should I begin?": this is the question which students will be able to answer.

Keywords: Technology, Internet-of-Things, Innovation, Business Strategy, Entrepreneurship, Retailing, Marketing Strategy.

JEL Classification System: M31 – Marketing; L81 - Retail and Wholesale Trade • e-Commerce; 031 – Innovation

# III. Case

## 3.1. Introduction

*"Entrepreneurship is the process whereby an individual or a group of individuals use organized efforts and means to pursue opportunities to create value and grow by fulfilling wants and needs through innovation and uniqueness, no matter what resources are currently controlled" (Coulter, 2001).*

This pedagogical case was developed with the objective of being used for learning purposes, aiming to illustrate a real business case of a brand that, despite having studied the market and having invested capital, did not succeed as expected. It stands as a meaningful example of entrepreneurship and can also be used as a guide or lesson to learn when venturing into a new business. It is common to hear that few startups can succeed in the long-term, but rarely do failure become a learning experience for other entrepreneurs. Failed startups have many lessons to offer to the ecosystem and offer guidance to the potential entrepreneur, and this area is not fully explored compared to the literature on successful startups (Kalyanasundaram, 2018). This study aims to contribute to this scourge and help students prepare for adverse scenarios where things are not always going well. Lecturers or trainers will also find important information and a case study to use as tool or as an object of study, to be used in classroom.

It is important for students to understand the entire context of the case and also to reflect on it in a pragmatic way. Therefore, the case is divided into the following parts:

- ***CASE*** - In this section all relevant data will be presented to contextualize the reader. In order to make the case from a pedagogical point of view more interesting, the student will be invited to interpret the data as if they were part of the founding team of the concept and expose the company's history as if it were pitching for an investor panel, as a real entrepreneur would have to do in real life. This panel has already invested to open the business and wants to understand if the business has future sustainability to grow. Thus, will be presented, divided by themes, all the information from the moment of market analysis until the first year of operation of the brand. At the end of the chapter will follow some questions

that will help the student reflect on what he has read and apply analytical tools to synthesize the information.

- ***PEDAGOGICAL NOTE*** - The pedagogical note will only be made available to professors and trainers, who will be able to find out the detailed resolution of the questions proposed to the students in the previous section. Additionally, the resolution will be accompanied by a literature review relevant to the case theme. The lecturer will also have available a list of additional analytical tools as well as an animation plan that will help him create moments of interaction with the students. Finally, a presentation with the case resolution and complementary tools will be provided.

- ***MANAGERIAL IMPLICATIONS*** - The main purpose of this case is to help prospective entrepreneurs minimize their chances of failure and to show you a real example of a brand that failed to run the long mile. As such, in the end, you will be presented the main lessons demonstrated in the case and important points that students should retain for their professional life.

## 3.2. Problem Presentation

The concept was created in September 2017, when an Arabic investor decided to hire a group of ten people with different backgrounds to help him to invest in Portugal. The challenge was clear. Find a new concept based on technology, innovative, which could make a difference in people's lives and also make a profit. The team developed the project during 6 months, with market and financial analysis, trying to find a suitable service which could stimulate Portuguese interest. The initial idea was to open a store, with mood areas, where the consumer could find areas related to daily life, for example office technologies, smart house, smart driving among others. The next step was to find a perfect location for the store. Giving the strong consumption habits of Portuguese consumers of buying in big shopping centers, it was decided to open a store in Centro Comercial Colombo, the most famous shopping mall in Lisbon. Due to space and investment and

budget limitations, the store became a small kiosk in the middle of Centro Comercial Colombo. Not only is the store unknown for the customers but also located in front of the biggest indirect competitor: Worten (biggest technology retailer in Portugal, a brand of Sonae). The store opened up in April 2018, with 4 employees and with a narrow assortment of 20 products.

At the beginning, the sales were low, however during the analised 6 months, the sales presented very varying growth rates, positive and negative. However, the following months presented much lower numbers than predicted, coming today to a non-profit situation. Further on more financial results will be presented, including a cost and revenue analysis with detailed monthly cost. When it comes to the online sales performance, given that no incentives were given, remained always under performance.

As mentioned before, the main objective of this pedagogical case study is to simulate among students the challenge of opening a new business from scratch and also to help guide them if one day, they decide to create their own business. Therefore, the case will be described as if the student was part of the founding team. The student will found with the initial chapter – case – important carefully selected information that can be used to later to answer a group of questions and design meaningful strategies.

## 3.3. Data Organized by theme

*You are part of the founding team of Techperks. In 2017, an Arabic investor hired you and 10 more employees from different backgrounds to help them found a successful retail business in Portugal. As the company's strategist, you were asked to analyse the technology market, potential competitors and the consumer behavior towards technology buying. The business must be a retailing activity, so, information about Retailing and Retailing trends can also support the team's decision making.*

### *3.3.1. THE MARKET – What surrounds Techperks?*

The Information and Communication Technologies (ICT) market in Portugal will grow by **2.2% year after year** and reach around **8,240 million euros in 2019,** according to the

2019's IDC forecasts. In three years, it will reach **8,586 million euros**. According with IDC's latest report the majority of national decision makers (71%) will invest more in digital transformation projects this year, namely in product innovation, services and business processes and customer engagement and loyalty, from the perspective of increasing revenues and competitiveness. Cloud, Internet of Things, Big Data and cybersecurity will be the most used technologies, with **annual growth rates of around** 7% between 2017 and 2022, according to the study *360 ° Vision of the ICT and Digital Market in Portugal – Market Quotes, Market Dimension and Forecasts 2018 - 2020*.

During the review period, investment in support functions is expected to be primarily targeted at business-specific operations (35% of the ICT market), customer service (13%), marketing and sales (13%), finance and accounting ( 9%), supply chain (9%) and human resources (8%). Looking at the sectors, retail, health, insurance, banking, industry and professional services will benefit most from this bet. According to the same IDC estimates, spending on all major categories of the ICT market will increase - such as software or communications services- and third platform technologies and innovation accelerators will represent an opportunity of over **5000 million euros by 2022.**

#### 3.3.1.1. Consumer Eletronics Market

The segment of IoT products for final consumption belongs to the consumer technology goods market, above forecasted. This market is subdivided into **7 categories:** large appliances, photography, small appliances, consumer electronics, information technology, telecommunications and office equipment. The **IoT consumer products fall into the Consumer Electronics category**, which is the fourth largest category in the market. According to data from consultant GfK (2019), this category reached in the first half of 2019, sales value of 184 million euros. Last year, the category totaled in Portugal 674 million dollars, contrary to the negative trend of 6% in Western Europe, growing 3% compared to 2017. Data analyzed by GfK show that consumers feel they deserve " self-pampering " and are willing to spend more, buying not so frequently but spending more in every purchase.

GfK also reveals that online sales of consumer technology goods surpassed, for the first time, a quarter of the total market (26.4%) in sales in Western European countries. This

is really the main reason for the 8.5% growth of these products, against the negative variation of 1.2% in offline sales.

Data collected by Statista in September 2019 also support GfK's research. The market in Portugal continues to grow and it is expect to continuously grow during the next 4 years. The number of users is also expected to present a positive development during the next years, at a rate between 8% and 10%. When it comes to the market channels, the offline channel is the consumers' favorite channel. Online Sales represented last year 22% of the market sales and this weight is expected to grow to 30% of the revenue by 2023.

In 2017, regarding consumers' age, the majority of users are aged between 25 and 34 years old (representing 25,1% of market revenue). The second most relevant age segment lies between 35 and 44 years old (24,4% of the revenue), followed by the segment between 45 and 54 years old (22,9%). The segment between 18 and 24 years old represented 12,7% of the revenue. In terms of gender, males consume more often than females. Males consumption represents 63% revenue, while females represents only 37%. In 2019, 40,4% of market users were in the high income classification, followed by 34,5% in the medium income group and 25,3% income group.

Statista's publication also mentions the biggest online sellers in 2018:

- Apple: 50,7 million dollars;
- Worten: 35,4 million dollars;
- Fnac: 30 million dollars;
- Amazon.com: 29,3 million dollars;
- Amazon.es: 21,3 million dollars.

All the information above described can be checked from appendix 1 to 7 in the section "Appendixes".

Portugal, for its part, continues to have the lowest record of online sales in Western Europe, although the evolution over the years has been significant. Last year, the weight of online sales of consumer technology goods rose from 5.2% to 7.1%.

#### 3.3.1.2. Consumer Technological Goods Market – Trends

According to the 2019's *FutureBuy* GfK report press release, 65 percent of respondents agreed that they now feel more in control of their buying decisions. The same study reveals **that 53 percent of consumers prefer the experience** rather than the product itself. GfK has identified **five key industry trends** that drive these experiences and influence purchasing decisions in the **Consumer Electronics** category.

Key trends relate to performance characteristics that provide enriching experiences; products that simplify our busy lives, and certain premium products, which reflect consumer aspirations. All trends result in experiences of excellence. Regardless of why you decide to buy a product, being able to buy it on any channel, from anywhere, at any time of day or night, is equally essential - hence the trend of borderless shopping.

The five trends that currently most influence the buying decision in this market are:

- **Performance:** Performance is all about the enriching experience provided by the high end features of the product. These activities which allow the consumer to have a better experience when using a device are identified as a growth priority according to with consumer behavior analysis and satisfy the consumer's need to capture moments of their life and share them with others anywhere. An example is the large appliance market (MGE), where capacity increase is a growing trend.

- **Simplification:** About 52% of respondents of the inquired search for solutions to simplify their lives. Connected and smart devices are clearly ahead of the remaining options in relation to simplification. In this case, the main challenge is to propose targeted and accessible solutions and improve connectivity between smart devices. Providing relevant usefulness for connected devices and simplifying everyday tasks such as cleaning and washing are at the top of consumers' wish lists. Robotic vacuum cleaners, very recognized for daily simplification, grew by 18 percent in value from January to June 2019. Robot sales surpassed the global vacuum cleaner segment, which grew 11 percent and had a negative growth momentum. The same applies to tumble dryers, which grew

by 13 percent. The advantage of this appliance is that consumers can eliminate a home appliance by merging two, acquiring space at home and eliminating an extra task.

- **Premium:** 53% of the respondents admitted being increasingly willing to pay a little more for higher quality products and thus forget about the low-cost concept. There is a growing group of consumers that reflect their identity and aspirations in the use and ownership of these premium products, all of which have to do with pampering themselves. Ultra-thin notebooks and OLED TVs are some examples. Another "A" segment that has experienced strong growth (almost a growth of 100%) is premium hair care devices, including dryers, curlers and trimmers priced at over 300 euros. A growing middle class in developing economies has been increasing the number of early adopters and high end consumers purchasing these new products - regardless of the premium price level.

- **Shopping Without Borders**: 29% of consumers chose a retailer for its convenience. This reflects the consumer's desire for a location-independent, 24/7 shopping experience. They shop across multiple channels and expect to have a unperceivable transition between physical retail, online and mobile - anytime, anywhere. A quarter of the overall market sales value was realized through the online channel in the first half of the year. Online sales grew 10%. However, over the past four years, sales of omnichannel retailers have grown by over 60%, while one-channel based retailers have grown by 25%. That's because omnichannel shopping gives consumers the best of both worlds. This demonstrates the importance of creating borderless sales experiences.

- **Developing Economies**: Some world regions as China or India have today a developing middle class, which means a high demand for technological consumer goods in the long-term. These developing economies tend to have large variations, which also result in large fluctuations and uncertainty for sellers. In the past, these markets were once seen as mere consumer markets but are now maturing. Some of these developing economies have developed their technological and

manufacturing skills, enabling them to supply most of their own domestic market demand as well as export. According to GfK point of sale data, around 50 percent of smartphones produced by Chinese brands were exported to other regions (Emerging Asia, Africa, Western Europe and EC Europe, etc.) in the second quarter of 2019. This comparatively to 30 percent in 2016. While there is a disparity in net income between developed and developing countries, the GfK consumer study indicates that people in developing economies have similar needs and preferences driven by Performance, Simplification, Premium and Borderless Shopping

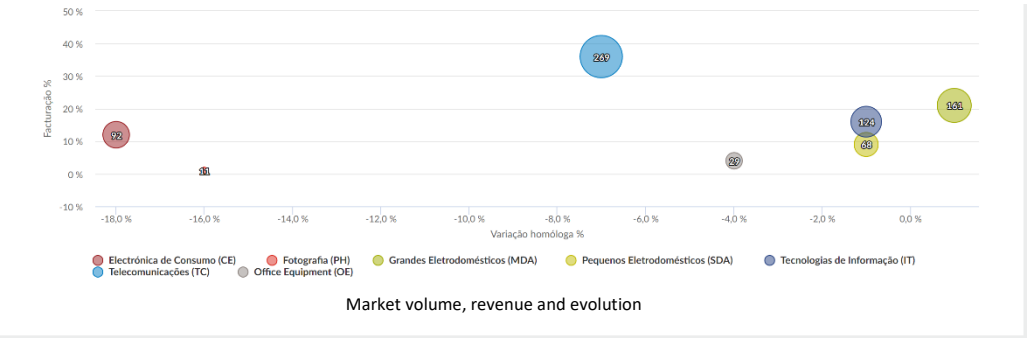



*Figure 1 - Consumption Electronics market in Portugal* | *Source: GfK, 2019*

#### 3.3.1.3. IoT market

***Globally***

The Internet of Things is significantly changing how organizations in all industries not only provide IT services, but primarily how they relate to customers, partners, employees, and develop in products, services, and business models. At the global level, IDC (2019) predicts a total amount of 745 billion dollars for IoT spending in 2019, which represents a growth of 15,4% in comparison with IoT spending in 2018, which counted for 646 billion dollars. The consultant IDC expects global IoT spending to surpass the 1 trillion dollars mark in 2022.

The revenue forecast encompasses the full breadth of the IoT ecosystem including intelligent and embedded systems shipments, connectivity services, infrastructure, purpose-built IoT platforms, applications, security, analytics, and professional services. IDC expects the worldwide market for IoT solutions to grow at a 20% from

1.9 trillion dollars in 2013 to 7.1 trillion dollars in 2020. This corresponds to an annual compound growth of 17%. In terms of market composition, the market for modules / sensors and connectivity represent 54% of the market and will continue to represent more than 50% of the IoT market in 2020.

**Worldwide Internet of Things Revenue, 2013-2020 ($B)**

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2013–2020 CAGR (%) |
|---|---|---|---|---|---|---|---|---|---|
| Revenue | 1,927.5 | 2,292.3 | 2,711.5 | 3,179.7 | 3,782.4 | 4,592.3 | 5,648.6 | 7,065.3 | 20.4 |
| Growth (%) | 25.7 | 18.9 | 18.3 | 17.3 | 19.0 | 21.4 | 23.0 | 25.1 | |

Note: See Table 1 for top 3 assumptions and Table 2 for key forecast assumptions.

Source: IDC, 2014

*Figure 2 – Wordwide IoT Revenue | Source: IDC, 2014*

According to Growth Enabler and Markets & Markets perspective, as the reader can visualize in Figure 3, the global IoT market will grow from 157 billion dollars in 2016 and reach 457 billion dollars by 2020, attaining a an expected annual growth rate (CAGR) of 28.5%. The global IoT market share will be dominated by three sub-sectors; Smart Cities (26%), Industrial IoT (24%) and Connected Health (20%). Followed by Smart Homes (14%), Connected Cars (7%), Smart Utilities (4%) and Wearables (3%).

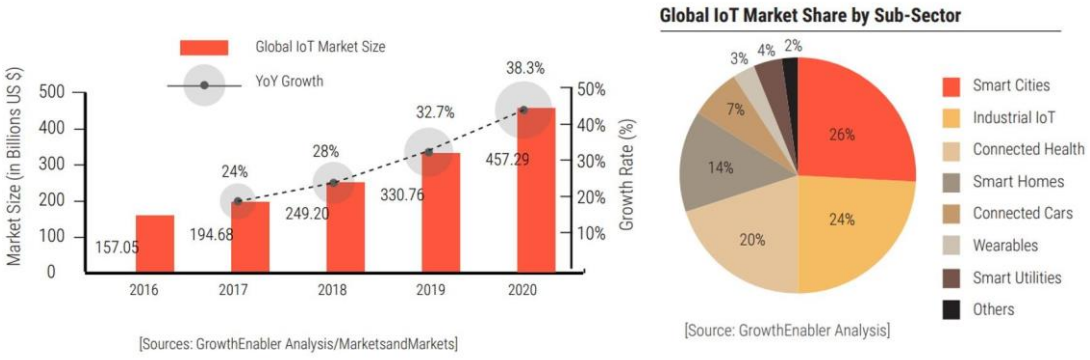



*Figure 3 – IoT market Evolution | Source: Markets and Markets, 2016*

Another market evaluation was also published by Fortune Business Insights in October 2019. According to the market research report, he global IoT market was valued at 190 billion dollars in 2018 and is projected to reach 1103 billion dollars by 2016, growing at an average yearly growth rate of 24,7% in the forecasted period.

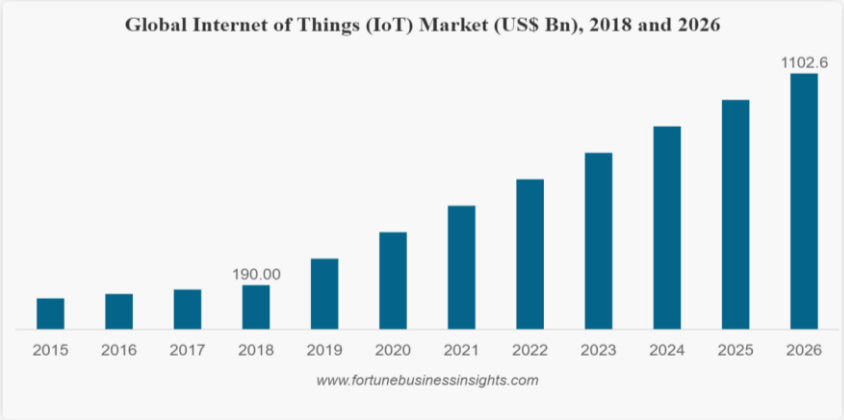



*Figure 4 – Global Internet of Things market| Source: Fortune Business Insights, 2019*

As reported by MarketWatch (April, 2019), the global IoT devices market was valued in 31,530 million dollars in 2016 and it is expected to reach around 158,140 million dollars in 2024. The global Internet of things (IoT) devices market is expected to grow at a CAGR of 23% between 2017 and 2024.

It is common to find several classifications and segmentation criteria which split the IoT market in several categories. IoT-related official organizations, such as IoT Analytics studies, normally, subdivide (as presented in Figure 5) the market into two big categories: Consumer-facing devices and Business-facing. It is also common to find it divided into three categories according final usage: consumer IoT and industrial IoT. As already mentioned, one can predict great growth in the following years from the IoT market.

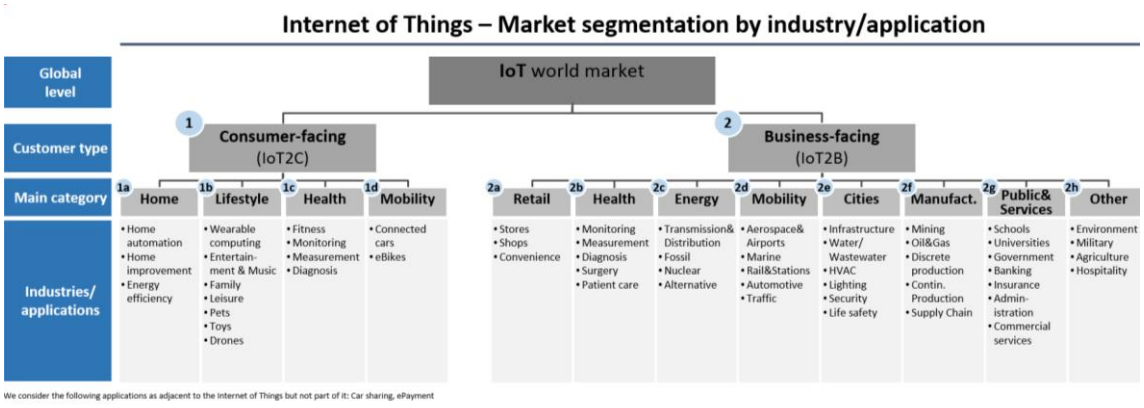



*Figure 5 – Global Internet of Things segmentation | Source: IoT Analytics, 2014,*

Nonetheless, the market is too wide and contains several segments, which present different development levels, and answers different consumers needs. The Fortune Business Insights (2019) presented in market research report several options to segmentate the market (see Appendix 8). In this case, it is important to further analyze data and information related with the IoT consumer market.

As above justified, the Internet of Things differs from the Consumer Internet of Things only because of the types of devices and applications, the component technologies and due to the final usage. The majority of investments is held by the Industrial Internet of Things market (manufacturing and industry), mainly drived by the development of Industry 4.0 (I-Scoop, 2017). According to Markets and Markets (2018, p.3) , " the growth of the consumer IoT market can be attributed to the growing number of internet users and adoption of smart devices, increasing awareness about fitness and rise in disposable incomes in developing economies, consumer preference for increased convenience and better lifestyle, increasing significance of home monitoring from remote locations, and government regulations for security of IoT devices. The breach in data security and data privacy is the major restraint for the market." .

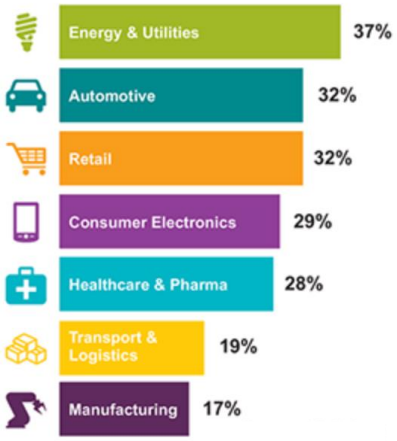



*Figure 6 – Global Internet of Things segmentation by end user | Source: Vodafone, 2015*

***Nationally***

In Portugal, IDC estimated in 2015 an installed base of 900 thousand IoT connected equipment in with only 2G, 3G and 4G connectivity. IDC expects the installed base of

IoT devices with 2G, 3G and 4G connectivity to reach almost 2 million by 2020. This corresponds to a compound annual growth of 16%.

However, Portugal still has a long way to go since only 44% of medium and large organizations are interested in using solutions based on IoT, when this proportion is 70% in Western Europe. In Portugal the main reasons pointed out by companies that have no interest are related to the cost of implementing the solutions. The most mature economic sectors are: Energy, Utilities, Telcom & Media and Transport. The less mature sectors are: Public Administration, Health, Industry, Banking and Distribution & Retail.

#### 3.3.1.4. Consumer IoT market segments with largest growth rates

In 2016, the IAB requested to Maru VCR&C to conduct a consumer study to better explain and attract visibility of consumer adoption of connected devices and the Consumer IoT. According to the research, "the largest majority of owned devices consists of rather traditional and early-stage product categories, while newer categories which are more independent from other devices *(e.g. from smartphones)*, such as smart wearables that are closer to the essence of the Consumer Internet of Things, are less prominent" (p.12).

In the report, the most 5 common product categories – purchased in the past and to be purchased in the future – are presented:

**Five most popular owned connected IoT consumer devices**

- **Connected/smart TVs and streaming** – 47%
- **Wearable health trackers**, 24%
- **Internet-enabled home control** – 17%
- **Connected car** – 16%
- **Smart watches** – 13%

**Five most demanded connected IoT consumer devices**

- **Connected/smart televisions and streaming** – 39%
- **Connected car**s – 37%

- **Wearable health trackers** 32%
- **Internet-enabled home control** 31%
- **Internet-enabled voice command systems** 31%

The data presented is a clear evidence of the strong interest that consumers are gaining about the newer and more advanced categories of connected devices.

In 2017, Gfk published a study related with Point-of-sales Panel and trends. In this report, one can find several information regarding Retailing performance, from different industries. One of the industries under study is the Consumer Electronics categories, and therefore, the smart products. Within several categories, the study indicates the product with highest grow potential, which categories are supposed to charge a higher price range and influences in general demand. As one can see, smart categories are expected to present positive sales development and meaningful increases in price. Categories such as Webcams, Routers, Multifunctional printers, Video Recorders and Dental care products, are now reaching a more mature place in the market. Despite a decrease in demand, increases in average price are predicted. When it comes to devices such as Communication cards, printers or audio systems, the perspectives are not so positive, and may indicate that these products are now entering in a decline product phase.

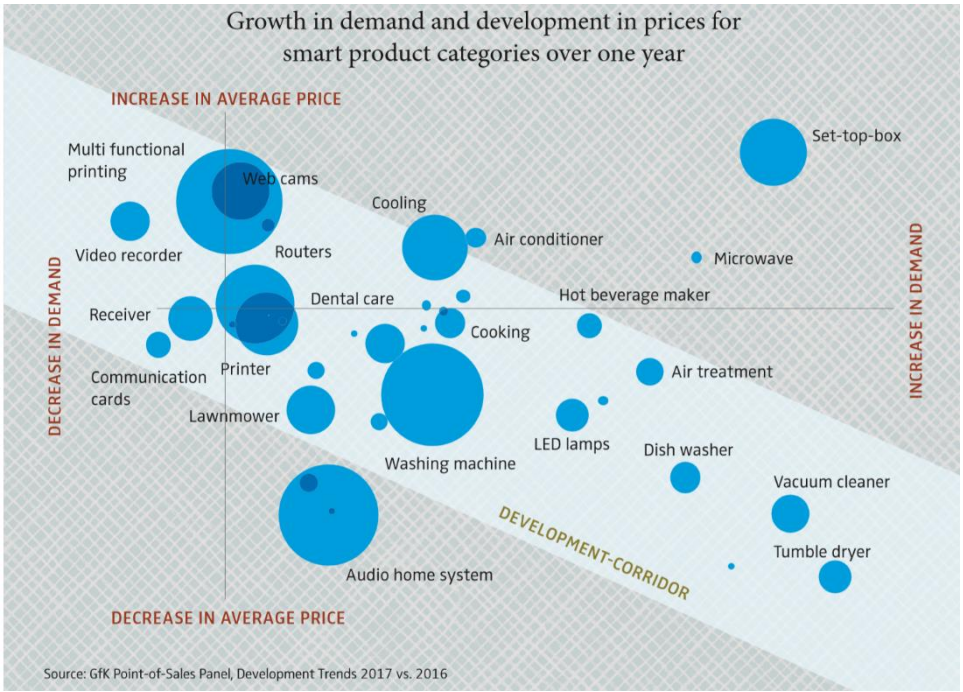



*Figure 7 – Smart products development | Source: GfK Verein, 2018*

#### 3.3.1.5. Success Factors in for IoT Market

Despite exponential growth, 60% of IoT initiatives stop at the concept approval stage and only 26% of companies are considered a complete success, while one third of all completed projects do not qualify as successful. This is the main conclusion of a study by Cisco in 2017, which surveyed 1,845 IT professionals and CEOs from across the United States, the United Kingdom, and India. Human factors such as culture, organization and leadership are key and reveal the impact of people on organizations. In fact, three of the four key factors in the success of IoT projects are related to people and their work:

- Collaboration between IT and business lines is a success factor, reported by 54% of respondents.
- Technological culture, team leaders promoted to the Board of Directors, is considered a key factor for 49%.
- IoT experience, both internally and through external agreements, factor selected at 48%.
- Overcome obstacles by relying on experts. 60% of respondents believe that while IoT initiatives seemed simple on paper, they became complicated.

The study indicates that the most successful organizations of IoT initiatives were supported by partner ecosystems in each phase of the project, looking from strategic planning to reporting and post-production results.

On other side, the consumer resistance to smart services may also be seen as a challenge. Consumers rely very much upon usability, reliability and cost as product characteristics. Many consumers (66%) according to a study published by the Internet Society in partnership with Consumers International consider the smart devices “terrifying”.

A scientific publication by Wan & Zeng (2015), pointed out that the critical success factors related to the innovative application of IoT depend on three major clusters of factors: technology dimension, market size and implementation. Thus, as market size can be pointed out the market volume, revenue and its growth and competitive activity. Implementation means understanding how technology and market size are combined and how they truly market themselves through resources, capabilities and strategies.

The study *The key factors driving IOT success* developed in 2017 by SAS and the Internet of Things Institute indicates that the main factors contributing to the success of projects in the IoT market are:

- Have an IoT strategy connected with business strategy;
- Collaboration with customers and suppliers;
- Competent and timely project management;
- Responsible and knowledgeable use of Data Analytics;
- Finding and developing the right talents;
- Senior leadership engagement and support.

#### 3.3.1.6. Retailing Market and trends

The investors inquiry described a potential idea for a retailing activity in Portugal. Therefore, is also important to mention how has the market evolved, and which trends are seen as the most important in the next few years.

The retail industry continues to evolve positively in Portugal. According to sales barometer data published in April 2019 by *the Portuguese Association of Distribution Companies* (APED), the food and non-food retail sectors reached a volume of 20.495 million euros, representing an increase of 3.4%. However, the largest increase was reflected in non-food retail, with growth of 4.3%, reaching 8.542 million euros in 2018. The same data also refer to the strong promotional activity in the country and reflect the strong demand from the Portuguese: promotions, which may not be a sustainable long-term strategy as it does not stimulate consumer loyalty for products and brands. Promotions are mainly priced at food retail, representing 46.4% of the revenue, 1.6% more than the previous year. Data also point to market maturity and stabilization. In terms of the non-food market, the fastest growing category was the equipment goods category (to which belongs to the category of electronic consumer goods and also consumer IoT products), with an increase of 5, 9%.

According to analysis by *The Institute of Grocery Distribution* (IGD), technological advancements and shopping experience will continue to mark the coming times in retail. The data collected by retailers, particularly about the customer, will allow them to offer a more personalized purchase. At the same time, sustainability issues will change the way retail does business and healthy lifestyles will grow even more in popularity as buying opportunities are increasingly available anywhere and anytime.

The last 12 months have seen the emergence of new and faster payment systems such as SIBS's *MBWay* payment method and the establishment of partnerships between retailers and healthcare players to encourage healthy eating habits. These developments are expected to intensify further in 2019. According to Toby Pickard, IGD's head of insights and innovation, the biggest trend in 2019 will be the continued rapid and radical change in the food and retail sector. Retailers will have to ensure significant efforts on new and innovative technologies, to match customers' expectations towards new and distinguishing shopping experiences. Shoppers' expectations have changed, and the retail and food industries have to be ready to adapt rapidly to these changes.

### *3.3.2. THE CONSUMER – how does the technology buyer behave?*

#### 3.3.2.1. Digital use in Portugal

Of the 10 million Portuguese habitants, 8 million are internet users and 6.7 million actively mark their presence on social networks. According to Hootsuite's *The Global State of Digital* report, referent to January 2019, there were 15.76 mobile subscriptions and about 6 million mobile social network users. However, despite the increasing use of the internet, television is still more widely used by adults (96%), compared to 94% using mobile phones and 67% using computers. On average, each Portuguese spends 6,30 hours on the internet, and one third of this time is spent on social networks (see appendix 9 to 11).

Of the 8 million Portuguese internet users, 85% surf the web on a daily basis, 10% once a week and 5% one or less times a month. The most searched sites are Google, Facebook and Youtube, in that order, followed by Sapo, Live, Wikipedia, Ball and Instagram. OLX ranks last in the top 10. In turn, the use of voice already occupies 19% of the total use of

the internet, which clearly reflects a tendency and a possible openness to a greater use of other gadgets, such as personal assistants like Alexa from Google.

Each Portuguese has, on average, 8.5 active accounts on social networks, where he spends about 2 hours of his day (only 21% of this time for professional purposes). Facebook, YouTube, Facebook Messenger, WhatsApp, Instagram and LinkedIn are the most used social networks. As for advertising audiences, Facebook still dominates with 6 million, followed by Instagram with 3.5 million. LinkedIn has a total audience of 3 million, having grown by almost 7%. Regarding internet use on mobile devices, 81% of users are on conversational platforms or watching videos. At the same time, 70% use location services and 43% use mobile banking.

#### 3.3.2.2. Consumer behavior towards technology consumption

As mentioned earlier, the technology market in Portugal has been growing in recent years, and more and more Portuguese are investing in their gadgets and like to be aware of the new technologies in the market. According to German consultant GfK (2019), sales of consumer technology increased by 6.9%, driven by significant growth in telecommunications consumption and also in the purchase of household appliances.

An important fact is also that the Portuguese are among the largest smartphone consumers at European level, being willing to pay more for smartphones and change models more often. In fact, it is estimated that within five years users should interact with smartphones on average 65 times a day, according to the global study *"Technology, Media & Telecom Predictions 2018"* by Deloitte (2018). Assuming that, many of the IoT products commercialized imply the use of the smartphone, it can be seen as positive predictor of a higher consumption of IoT technologies.

#### 3.3.2.3. Consumer Behavior in E-commerce

Online commerce is conquering more and more Portuguese who are embracing the online shopper trend. 35% of the population over 15 years old shop online, 85% have already searched for a product or service, with mobile devices registering 33% of national online shopping. Consumers are also spending more: they have spent an average of 606 euros in the last 12 months, more than in the same period last year (543 euros), as result of a survey of a thousand Portuguese respondents under the *Observador Cetelem Ecommerce 2019.*

According to the survey - conducted between March 12 and 23, 2019 - online shoppers make purchases on average 5 times a year. Regarding the prospects of future spending, in the next 12 months, 80% of Portuguese intend to spend around the same. Only 14% expect to spend more and only a minority (7%) indicate they want to reduce their spending.

"In a more detailed analysis, it is possible to verify that the Portuguese between 25 and 34 years old are the ones who spend the most (744 euros), followed by consumers between 45 and 54 years old (728 euros). In Greater Lisbon (17%) and in the South (24%) consumers want to spend between 250 and 499 euros while in Greater Porto 29% assume to spend between 500 and 1,199 euros ", concludes the survey (Observador Cetelem Ecommerce, 2019, p.16).

It should be noted that 39% of Portuguese enjoy online shopping, 19% more than the previous year. Of these, 32% confirm that they have made online purchases in the last 12 months and 7% indicate that their last purchase was over a year ago.

### *Higher demand for premium products*

In the years of the crisis, the boom in low cost consumption was seen, with airlines, clothing stores and even hairdressers offering cheaper options. Now, the Portuguese are more adept at more expensive products' segments such as luxury, and do not mind paying a higher amount for higher quality products. Acording to the new *Changing Consumer Prosperity (2019)* report by Nielsen, most domestic consumers say they are willing to pay a higher price for premium products they consider to be of higher quality. More than 60% of the Portuguese believe that this segment offers higher quality, followed by superior function or performance (53%), customer service (50%) and the unique and differentiating factor (43%). The same study was highlights each are the most important categories in this new trend (see appendix 12).

The choice of premium products happens in the most varied categories, from food to technology. In Portugal, 36% of consumers choose to buy the premium segment of these products, while in Europe, only 31% of consumers make this choice. This may be an important fact to Techperks. Later in this case study, sales data will be presented that also reflects this trend.

#### 3.3.2.4. Consumer consumption of connected devices

Consumers are increasingly connected across multiple platforms, and companies need to be in place too, so that they can establish a good relationship with their consumers and meet their demands. Technology and behavior are the watchwords. As discussed earlier, the IoT consumer market is going to make big strides and will continue to be very relevant for years to come. But what makes this market relevant and motivates consumers? Are these typically early adopters? What think consumers about data collection, privacy and security?

Consumer adoption of devices connected across networks, such as home smart products (such as smart fridges or dishwashers) and wearable technology is rising. According to Accenture's "*The Internet of Things: The Future of Consumer Adoption"* (2014):

- 30% of consumers already planned to purchase an IoT device to in-home use in the following next two years, such a smart thermostat, self-driving vacuum cleaners and smart refrigerators.
- While consumer adoption of connected technology will be more gradual in the short term, widespread adoption will be inevitable over the next five years.
- In 2014, 7 percent of consumers owned a wearable IoT device and 4 percent of consumers owned an in-home IoT device. Nearly two-thirds of consumers planed to buy an in-home device in the next five years and wearable technology ownership has doubled by 2015—increasing from 7 percent in 2014 to 14 percent by 2015. By 2016, wearable technology had double again and reached a total of 28 percent adoption.

After strong adoption predictions, it is also important to portrait the "typical consumer" who is looking for the connected consumer products market, segmented according to demographic, psychographic and behavioral criteria. According to a study produced by the consulting firm MARU VCR&C in partnership with IAB (*Interactive Advertising Bureau)* in 2016, the standard customer is:

- Both women or man;
- Between 18-34 years or 35-54 years old;

- Receives a high income;
- Has a college degree;
- Is a *Tech Junkie;*
- Is excited about technology;
- Is willing to see advertising in his/hers smart device;
- Has kids in its household.
- Lies value of usefulness, reliability and security as its top three priorities regarding smart products;
- Use the device daily;
- Values compatibility between devices, in special with smartphones, laptops and tablets.

Among different characteristics and benefits, the most important attributes when buying a connected device are its usefulness, convenience and innovation (see appendix 13).

#### 3.3.2.5. Adoption Barriers and consumers' concerns towards IoT devices

Privacy and security concerns are driving many customers away from purchasing Internet of Things devices, according to a recent report from the Internet Society and Consumers International. The research, published in May 2019, explored consumer perceptions and attitudes towards trust, security and the privacy of consumer IoT devices across the United States, Australia, Japan, France, Canada and United Kingdom.

A disturbing number published in the report was that almost 63% from consumers find connected devices "scary". In fact, 75% distrust the way how the data is treated, collected and used. From respondents who do not owned a smart device, 28% assumed not buying it due to privacy concerns. Also, only 50% the enquired knew how to disable the data collection from their devices.

The report stated that high levels of connected device ownership is not a clear indication for consumer's satisfaction about privacy and security of these devices. On average, 65% of consumers across all markets are concerned with the way connected devices collect and use personal data, with the American showing the highest concern levels at 70%. On the other hand, consumers in France (60%) and Japan (52%) show less concern about the way these devices collect and use data, than the rest of the surveyed countries. In terms of technology forms, the highest concerns regarding data collection and security are

expressed by 69% about mobile apps (such as banking or health apps). The lowest level of concern found, was for tablets or laptops – which 62% of people are concerned about.


*Figure 8 – Factors influencing when making a purchase decision*

**Source:** The trust opportunity: Exploring consumer's attitudes to the Internet of Things, 2019

Companies and products should not ignore the numbers described above. With RGPD and other regulations designed to protect the use of consumer data, they seem to indicate a clear path that consumers feel too vulnerable. Businesses must therefore adapt and show from the outset transparency in the use and collection of information as well as ensure consumer protection. This can also become a competitive advantage, since if companies can stand out from others and ensure a safer IoT environment, they will be able to attract consumer confidence.

### 3.3.3. *COMPETITION – who dominates the technology retailing?*

When approaching the idea to develop a business in the area of Consumer IoT related with retailing activities,, it is important to highlight two types of important retailers: those which will be considered direct competition and other considered indirect competition. Although the non-existence of retailers in Portugal specialized in end-user IoT products, many of the major distributors in the market offer some of the same categories in the range. Directly, we can find some smaller companies, such as *Onedirect* and *PCDiga*.

Indirectly, it can compete with major players in the market such as *Worten, Rádio Popular, Media Markt* or *Fnac*. Confidence and convenience in big players, as well as intense promotional activity, represent obstacles to brand success. Will an innovative value proposition be enough to overcome them?

#### 3.3.3.1. Direct

***PC Diga***

PCDiga is one of the most important technology specialized stores in Portugal. Founded in Leiria, it currently has 6 stores and had sales of around 30 million euros last year. It receives more than 10,000 orders a month and acts as a "silent" but dangerous competitor to large retailers. With an audience composed mostly of young geeks, informed and hungry for technology, PCDIGA is one of the main references in E-commerce in selling technology in Portugal. Its rapid growth in physical stores, allows more customers to know the most varied products in person and interact with the store's specialized team before making their purchase. It represents some brands exclusively in Portugal, such as the Chinese OnePlus.

***V by Vodafone***

Vodafone is an international player created in the United Kingdom and present in dozens of countries in the telecommunication market. They have been marketing IoT solutions for companies and entities for some years, and last year decided to implement the V by Vodafone project, which is based on a subscription program for consumer IoT products that can be coordinated remotely via a mobile phone.

Sales of this new segment of Vodafone have not yet been published, but everything seems to indicate, along with the growth of the B2B area of IoT solutions that the business is going well. This is a major threat for Techperks as it integrates smart device usage with regular telecom usage, and as such, presents better shopping and usage experiences for the customer, who can now have everything on their smartphone. In addition, it enables the use of these products through a monthly subscription, which helps greatly as customers can integrate all the services they contract with Vodafone. In addition,

Vodafone has many years of operations and gathers a lot of confidence from Portuguese consumers.

#### 3.3.3.2. Indirect

***Worten***

Worten is a SONAE private group company specialized in home appliance sales, consumer electronics and technology, counting with 260 stores in Portugal and Spain . It has been consolidating its position in the market in recent years and is currently the market leader. Worten continued its upward trend and ended 2018 with strong growth of 7,6% achieving a total of 1,098 million euros in sales. Last year, the retailer also accelerated its digital transformation with increasing weight of e-commerce sales and the launch of a marketplace in Portugal. With a grow of 50% in online sales, Worten is today the biggest E-commerce player in Portugal. This year, the company has decided to diversify the business and enter in new markets online, by creating an online Marketplace with a wider assortment and offering more options to consumers. Fnac was pioneer when it comes to offering marketplaces, having opened an online marketplace few years ago. Worten's Marketplace offers today more than 100 thousand products, among electronics but also decoration or home furniture. The brand decided to invest in this new business model as a way to grow fastly, based on online (which grows every year at two digits), with an wider product offering, strengthening its online positioning and introducing an omnichannel strategy.

***Fnac***

Fnac is a French electronics retailer of the Fnac Darcy group, which opened its first store in Lisbon in 1998, dedicated to the distribution of technological goods and such as literature, music, film, photography, video, sound and associated technologies.

It is one of the most important European companies and today has stores in 8 countries: France, Belgium, Spain, Italy, Portugal, Switzerland, Brazil and Morocco. The brand has today 29 stores in Portugal and also stands out for its performance in online sales, for which it was a pioneer in the country, with the opening a few years ago of a marketplace.

Fnac' Marketplace counts with more than 250 thousand customers and sales growth by two digits. It stands out for its high level of online service and its omnichannel experience.

***Media Markt***

MediaMarkt is a German brand belonging to the Metro group, which also owns brands such as Saturn or Makro. More recently, the same group also bought 25% of Fnac Darcy's capital, becoming the largest shareholder of the French group.

With several stores in Portugal in Spain, Media Markt has been highlighted by important actions and striking campaigns launched in recent years, such as "I am not silly" or "Day without VAT". It is distinguished by its wide range and strong promotional activity, always accompanied by brochures and special promotion days.

They have also been offering an online store since 2016 and have been growing in recent years. In Spain they are market leaders, but in Portugal they have not yet managed to beat other market players.

~


*Figure 9 – Indirect competitor positioning | Source: " Worten in the Long Tail" (Trigo, 2016)*

### *3.3.4. TECHPERKS - the vision behind young entrepreneurs*

*After deep analysis of the market, consumers and potential competition, you and your team decide to propose a new retail business based on a market gap – the sale of IoT products for consumer. After brainstorming, it is decided to call it Techperks, to appeal to tech-savvy customers. After 6 months of operation, the investor asks you and your team to compile all the information about the company – history, strategy, business development and results, which reflects how far the company has come and to decided either if the business has conditions to continue or if it should be sold or shunted down.*

*You and your team decide to drive a detailed internal analysis about the brand, presenting all data which is related with the small business.*

#### 3.3.4.1. Company History

Techperks is a company that belongs to the LBS Services group, founded in 2017. The brand was created by a group of young entrepreneurs, with the support of an Arabic investor. He had worked for 25 years in the Sales area in the Middle East, and it was finally time to invest in its own business. He chose Europe for being a large market, with many opportunities, talents and capable (with many available resources) of embracing a new technology. Ammar Lababidi saw in Lisbon what many other investors see in the city: lower cost, qualified and skilled talents and a proper entrepreneurship environment. According to the magazine *fDi* (2019) is Lisbon becoming at a fast pace a very important innovation incubator ecosystem. Due to his deep experience as HP Sales Managing Director in Dubai, he wanted to invest in a technological area, where he could use his expertise. The brand was developed after analyzing the Portuguese technology market and finding that, while there were many tech retailers in the Portuguese market, there was not one specialized in consumer Internet of Things products, where customers could easily and conveniently access to very innovative and state-of-art consumer technologies.

After research, it was clear that there is no greater convenience for a Portuguese consumer than being able to find all of their favorite stores at one single place: a shopping center ( 69% choose these as their favorite shopping area (CBRE, 2017)). Since the brand had just been born and wanted to gain notoriety, it was decided to choose one of Lisbon's main shopping centers.

The place chosen to open the store was the Colombo Shopping Center. Although the concept has been prepared since 2017, the store only opened in April 2018, with a fixed assortment of 17 exclusive products, including car sensors, property search gadgets, air purifiers and intelligent video systems.

Initially, it was intended to open a store and not a pop-up store, to give more credibility and to present another type of products. However, due to the high cost of renting a store in the city's main shopping center and also due to the growing number of pop-up stores in Portugal (often even as a preferred way to make a new product known), the team

decided to come up with a pop-up format. The format was compatible with the brand values of convenience, simplicity and innovation. However, the small size available, eventually conditioned the level of service and the offer of new products, as well as the brand awareness. The store is today located in a main square of the shopping center, next to Huawei and Worten. Although it is very close to one of the main competitors, it also means that the competitor's target and the traffic it generates can be very interesting for Techperks. A typical Worten customer is likely to pass by the Techperks kiosk and may potentially be interested in Techperks' specialty products.

Within a few months of opening the store, it was decided to start developing online sales. Two strategies were tested: online sale of products on the brand's website and also via Amazon Spain. Since the brand's website was not known to the consumer, sales at the Amazon store grew rapidly, although competition was higher. It was a way to test online sales and also a possible acceptance of the Spanish market to the concept. Sales eventually stagnated later, due to the fact that many other sellers also began to sell similar products. Thus, the website store eventually gained more relevance. In addition, selling directly on the site brought more business advantages, as no fees would have to be paid to Amazon and competition was not so directly encountered by the consumer.

In terms of analysis, the reader will find in this case a period of analysis of the first 6 months (April-October). The brand counted in September 2018 with 4 sales employees and 1 employee giving Backoffice support.

#### 3.3.4.2. Strategy

The brand strategy, from the beginning, was to focus on finding products not yet sold in Portugal. The value proposition focuses on the marketing of smart products with different price ranges and end-uses, brands not yet present in Portugal and which the consumer can usually only find online and who often does not buy much has no guarantee of assistance. Thus, the brand strategy was to analyze the foreign market and to understand which IoT products were trending in countries such as China, the United States and some European countries and sell them in prominence in Portugal. Having found these products, it was important to ensure that the competitive advantage was maintained over the medium to long term and not easily overthrown by retailers with greater commercial power. For this,

the brand has developed exclusive partnerships with 6 key brands, from which come the vast majority of products of the assortment. This was one of the difficulties the brand encountered, as its bargaining power at the outset was rather low and many of the manufacturers did not want to commit to exclusive deals with a brand that was just starting up.

Tech Perks' mission is to give Portuguese consumers access to innovative technology products that help make their daily lives convenient and intuitive. In addition to access, Techperks also wants to help them find the right product and build a trusting relationship with their customers through the follow-up and assistance required with premium service. The brand wants to accelerate the future. Product by product. In the future, Techperks wants to be present in all major population centers of the country and have several points of sale, with a wider range and adapted to consumer needs.

**Positioning statement:** *"Accelerating the future" (*Techperks,2018*)*

**Target consumers**: Adults, between 25 and 54, with medium to high-income, living in the metropolis area of Lisbon. Early adopters interested in discovering innovative products but not willing to abdicate from service and after-sales service.

**Mission Statement**:" We take pride in displaying some of the most innovative brands in the world, offering products sold for their quality." (Techperks, 2018)

#### 3.3.4.3. Marketing-Mix

- **PRODUCT**

***Assortment***

In order to maintain an exclusive assortment, 17 different products were initially sold. A limited and shallow assortment. These products were grouped by categories according to their functionality: smart living, smart health, smart home and smart mobility. The smart living category includes sensors used to make everyday life easier, such as location sensors for car keys and wallet, as well as smart sunglasses and luggage that go by itself. In the smart health category, a smart air purifier, capable of analyzing air quality with sensors and purifying it automatically. In the smart mobility category, products such as sensors for cars. Lastly, the smart home category includes the largest number of products

as well as the bestselling ones, such as the Nebula Capsule, Mars smart cameras or surveillance cameras. Those products belonged to major brands such as: Anker, Nebula, Reolink, Zungle, Wynd, Nutspace, Nonda and Travelmates.

The products which composed the initially assortment were (Techperks, 2018):

| Category | Brand | Product | Retail price |
|---|---|---|---|
| ***Smart Living*** | *Travelmate* | *Robotic Luggage* | 999€ |
| | *Nutspace* | *Mini* | 16€ |
| | *Nutspace* | *Find 3* | 26€ |
| | *Zungle* | *Smart sunglasses* | 135€ |

Table 1 – Smart Living Products | Source: Techperks, 2018

| Category | Brand | Product | Retail price |
|---|---|---|---|
| ***Smart Health*** | *Wynd* | *Air Purifier* | 273€ |

Table 2 – Smart Health Products | Source: Techperks 2018

| Category | Brand | Product | Retail price |
|---|---|---|---|
| ***Smart Home*** | *Capsule* | *Nebula Smart Projector* | 499€ |
| | *Capsule* | *Nebula Tripod* | 60€ |
| | *Argus* | *Solar Surveillance Camera* | 176€ |
| | *Argus* | *Camera Charger* | 40€ |
| | *Argus* | *GO Smart Camera 4G* | 199€ |
| | *Maxcio* | *Smart Wifi Plug* | 30€ |

Table 3 – Smart Home Products | Source: Techperks 2018

| Category | Brand | Product | Retail price |
|---|---|---|---|
| ***Smart Mobility*** | *Nonda* | *Zus Smart Car Charger* | 55€ |
| | | *Zus Tire Safety Monitor* | 165€ |

| | | | |
|---|---|---|---|
| | | *Zus Key Finder* | 30€ |
| | | *Zus Car Healthy Monitor* | 90€ |

Table 4 – Smart Health Products | Source: Techperks, 2018

If one compare the product table with the information described in the first part of this case, it stands that only two categories are part of Techperks' assortment: Internet-enabled home devices and devices to connected cars. Between April and October, the most often purchased products were Nebula Capsule (at a price of 499€ - the most expensive product), the Nutspace Find Mini (the cheapest product) and the Solar Surveillance Camera (medium price product).

### *After-Sales Service*

The after-sales service was not required many times by the customers. When so, the process is to receive the product in store, analyse possible malfunctions and give the customer a new product. One of the advantages of having established partnerships was the possibility to substitute damaged products. When a customer has a problem with any product, of technical nature, Techperks is entitled to give a new product to the customer and send back the damaged product to the supplier. Thereby, from a customer's perspective, the service is pleasant and efficient, better when compared with competitors, whereby customers normally wait until 1 month for a reparation service.

However, what can be seen has a less positive aspect is the fact that Techperks doesn't establishes post-sales contact with customers. It is not yet established the record/registration of customers data, such as name, email or mobile number. Thereby, the brand loses immediately contact with its customer after sales. What could have turned into a long-time lasting relationship is limited to a single sale. Additionally, the brand could also invite and give incentives to lead customer to review social media webpages after purchasing. As it will be further analyzed in the section "PLACE", there is no connection between the physical store and the online store, no omnichannel strategy. The current strategy is not contributing into relationships building, which will not have a positive impact in customer loyalty.

- **PRICE**

In terms of price strategy, those are not directly comparable with competitors' price, given that they were only available online or in Techperks. However, to better highlight the reader, the author collected the results of a quick search online about the bestselling products.

After comparison (Appendix 15), it is possible to see that Techperks has for all the selected products a higher price. For all the 3 examples, the competition was online, not for physical stores. The higher price strategy of Techperks may be explained according to two variables: low buying power (consequence of low-quantity orders) and operating costs. To operate a store in the most visited shopping center in Lisbon is one of the most expensive locations to choose. It can be seen as threat if the consumer is price-sensitive, however, is it values service and post-sales support, he or she will prefer to be at Techperks.

- **PLACE**

### *Physical store*

The small shop, located on floor 0 of the shopping center, occupies a space of 5X5 square meters. Each side of the kiosk represents an area of the store, i.e. one side is dedicated to smart mobility, another to smart home and the other two to living and health. The store runs from 10 am to midnight every day of the week. Customers always find a sales person available for advice and explanation of products, which can also be tried by the customer through trial versions.

In terms of decor, the pop up store includes very technological elements, such has LED lights in tons of blue and white, white surfaces and products exposed inside acrylic expositors. The concept of the pop-up was developed to be modern and to recall customer's attention. The colors which represent the brand are blue, white, silver and black. All these colors are incorporated in the stand décor (see appendix 14).

To entertain customers and also to recall traffic attention, tablets are used on top of the store surface with product tutorials and videos. They are effective as a way to invite customers to get closer and to inform them about several product characteristics.

Additionally, tablets also contribute to personify and incorporate brand's values and mission about strengthening its bonds with in-store technology.

Techperks physical space can considered modern, attractive and appealing. However, being a pop-up store, it fails regarding the average time each customer spend in the store. The format wins in appeal and convenience, but stays behind regarding the time spent interacting with the brand. The most common customer in-store journey is:

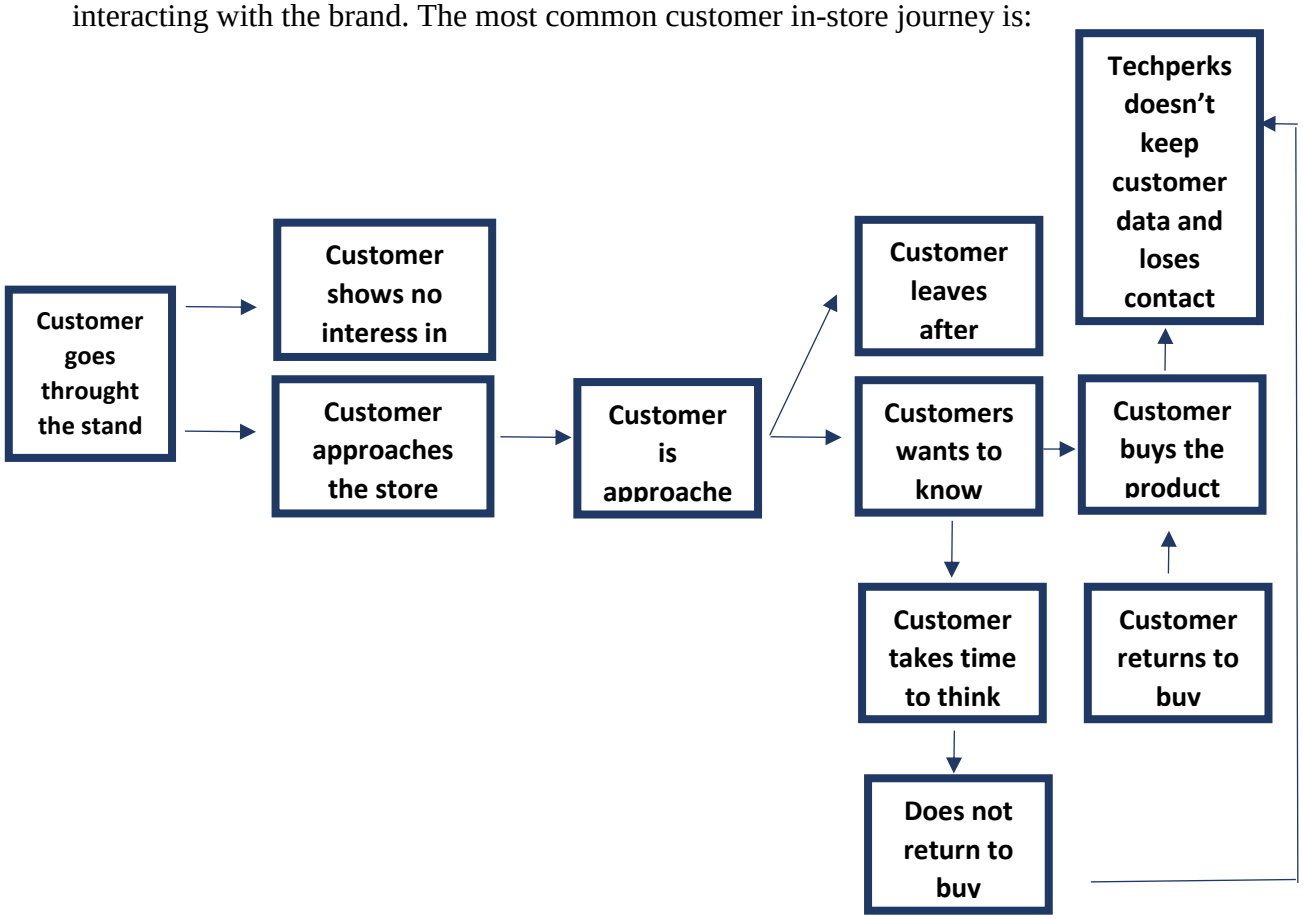



*Figure 10 - Customer Journey mapping | Source: Techperks, 2019*


*Figure 11 – Techperks physical store | Source: www.techperks.com, 2019*

### *Online Store*

The online store of Techperks has recently opened "doors", being in activity since July 2018. The interface found by consumers at *www.techperks.com* is very similar with the environment found in the physical store, but with additional advantages. One will be able to find a wider assortment online, with more product categories and access to exclusive promotions. It is divided into three main areas – products, price reductions and information about the brand. Additionally, the customer can also subscribe a newsletter to receive information about new products and events. The objective behind the store was to reach other markets to offer an online experience. Besides, the store was thought also to reach new customers in other Portuguese cities, such as Porto or Faro.

An analysis made by SIBS in 2017 about the most widely used payment methods in online commerce in Portugal, elected the national payment as the Portuguese's favorites. 53% of the e-consumers pay with ATM Services, 33% with MBnet and only 12% with PayPal. MBWay is currently showing strong signs of growth, with 1 in every 5 Portuguese admitting to use it online. Therefore, Techperks decided to offer the possibility to customers to pay online with credit card, PayPal or via money transfer.

In terms of cost of shipping, Techperks offers the cost of home delivery for every purchase above 50€. Purchases below 50€ are subject to the payment of delivery cost of 5,95€. When comparing both online and physical stores, the brand has been struggling regarding omnichannel. It is not possible to the customer to order online and pick the products in store, the employers from store are not aware about online operations and online purchases can not be reached or accessed physically in the stores.

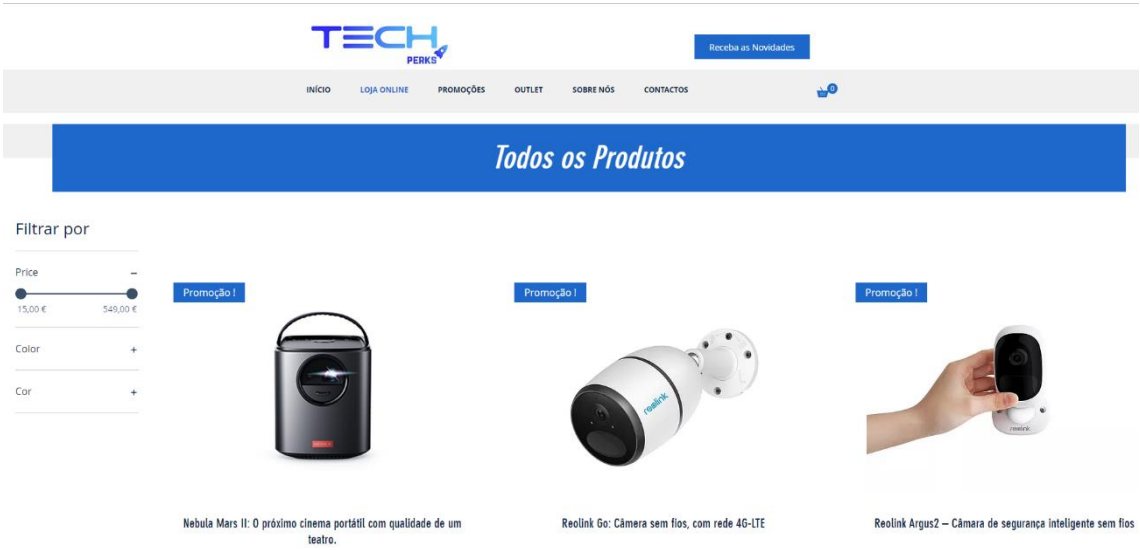



*Figure 12 – Techperks online store | Source: Techperks, 2019*

- **PROMOTION**

As a small business, Techperks does not communicate massively with its customer as the big distributors. Its marketing budget is limited to Facebook paid publicity, newsletter and the offer of flyers in the store. In social media, it is possible to find Techperks in Facebook, Instagram and LinkedIn. In the company´s social pages, one can find information regarding the brand, publications with new products, review them and receive news about price reductions.

As seen in figures 13 e 14, customer interaction with Techperks is very limited. The Facebook page is only followed by 229 followers and 242 Likes, while the Instagram page is also not very developed, being followed by 73 people. In average, Techperks only publishes content once a month or once in every two months, which does not contribute to acquire new customers. In August, Techperks did a paid publicity campaign focused on a sales promotions for the flagship product: Nebula Capsule. The campaigned aired during 2 weeks with “ghost posts”, which reflected in a 25% increase in sales for the correspondent product.

A study published by Edison Research in January 2019 pointed out that Facebook has been losing consumers, especially to the younger target. However, the same study points out that Facebook remains by far the most influential social network in Portugal and that

the largest loss of users occurs in the younger age groups. As such, the most relevant target for Techperks is still very present on Facebook, which justifies the investment in the network.

Another commonly used strategy is to develop time-to-time sales promotion. The brand understands how Portuguese consumers value price promotions and recognizes the reductions in prices for every competitor. Therefore, Techperks decided to analyze weekly products 'sales performance and stocks levels and after it, offer price reductions on those with lower interests among costumers, online and offline.


*Figure 13. – Techperks Instagram Page*
*Source : Instagram*


*Figure 14. – Techperks Facebook Page*
*Source : Facebook*

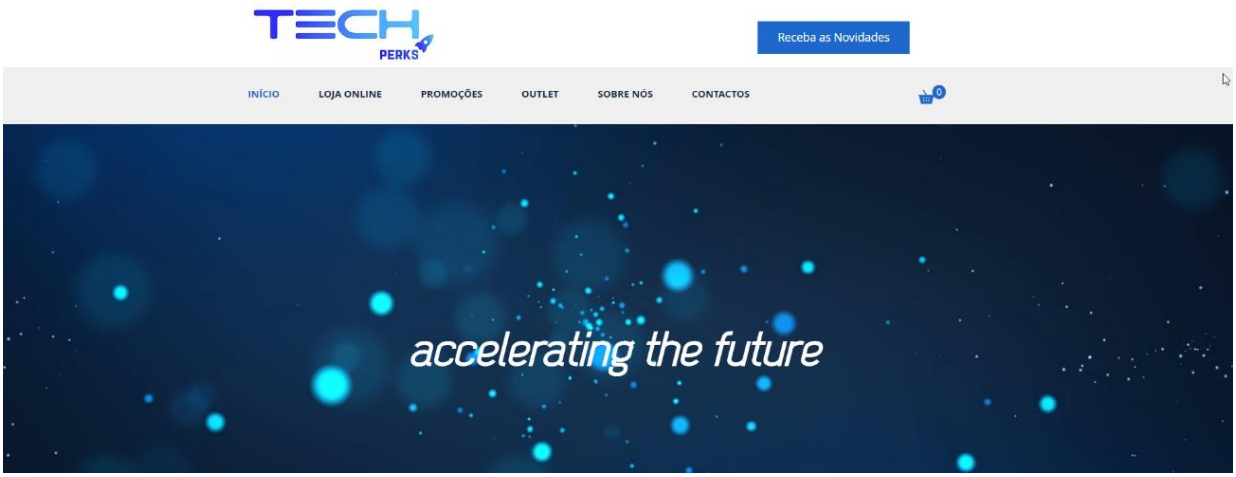



*Figure 15 – Techperks website | Source: Techperks, 2019*


*Figure 16 – Sales promotions*
*Source: Techperks, 2018*


*Figure 17 – Sales promotions*
*Source: Techperks, 2018*

The major incentive to promote products and sales, commonly used by various retailers, was the payment of sales commissions to sales team employees. In addition to their normal salary, each employee would receive 10-15% of the total monthly sales value, above a minimum value. The commission percentage is allocated according to the sales ceiling reached per month. Sometimes employees also have campaigns that offer higher and dedicated commissions especially for one product group to one product.

#### 3.3.4.4. Financial Performance

In the Following are presented documents and financial information regarding the brand's performance during the period under review (April to October). These analyzes are intended to elucidate the reader about brand performance and, in an unbiased manner, to lead them to evaluate the evolution and brand development of the first six months.

- **Net revenue, per month (Techperks, 2019):**

| Month | Net value (excluding VAT) |
|---|---|
| *April* | 2694€ |
| *May* | 3784€ |
| *June* | 3768€ |
| *July* | 5546€ |
| *August* | 5292€ |
| *September* | 4326€ |
| *October* | 7544€ |
| ***Total*** | **32954€** |

Table 8 – Monthly Revenue | Source: Techperks, 2018

- **Sales per product, total (Techperks, 2019):**

| Product | Units |
|---|---|
| *Nebula Smart Projector* | **21** |
| *Nebula Tripod* | **5** |
| *Argus Solar Camera* | **4** |
| *Argus Camera Charger* | **2** |
| *Argus Go Smart Camera* | **12** |
| *Maxcio Smart Wifi Plug* | **2** |

| | |
|---|---|
| *Nonda Zus Smart Car* | **6** |
| *Nonda Zus Tire Safety Monitor* | **6** |
| *Nonda Key Finder* | **10** |
| *Nonda Car Heakthy Monitor* | **4** |
| *Nutspace Mini* | **20** |
| *Nutspace Find 3* | **11** |
| *Zungle Smart Glasses* | **12** |
| *Wynd Air Purifier* | **5** |
| *Lumos Smart Light* | **4** |

Table 9 – Sales per Product | Source: Techperks, 2018

- **Average Operating Costs (Techperks, 2019):**

| Month | Net value (excluding VAT) |
|---|---|
| *Monthly Rent* | 3497€ |
| *Employees Cost* | 4969€ |
| *Rented equipment costs* | 116€ |
| *Commissions* | 600€ |
| ***Total Average monthly costs*** | **9182€** |

Table 10 – Monthly operating Costs | Source: Techperks, 2018

When reviewing some Techperks financial data, it is also important to address them with some difficulties and feedback experienced by the store management team. Despite the optimist sentiment, store numbers are below expectations. The first months of operation did not cover the costs of operating the store at Centro Comercial Colombo and the store continued to have a very limited number of customers. Although it has very positive sales growth rates between a few months, they are not very constant and often based on price factors, which means the products may not be interesting enough for customer to pay a higher price tag. In addition, according to the store manager, traffic passing through the

daily store is little converted to actual customer traffic in the store. The customer often approaches the stand also erroneously, considering that it is an information desk rather than a store, one that may indicate the inconvenience of the format. As for the feedback collected from customers, they seem to find the concept interesting but still have some hesitation at the time of purchase. The purchase is mostly scheduled and is often intended to buy gifts or offers from someone other than the buyer. Along with the assortment, customers ask for more rotation and turnover whenever the novelty factor in each purchase is very relevant. The analysis and sales performance of each product shows that most of the sales occurred in the first three weeks of product launch in the store, which indicates that the novelty factor is a stimulant of purchase intention.

Also notorious is the way the brand suffers with little notoriety. It is common to hear from customers questions such as: "Are you recently opened?" or “Are you a new store? " and "How long are you staying here?”, which shows that the first moment of contact with the store is occasional when they visit the shopping center. According to the store manager, the customer goes to the store for the first time without knowing the concept and mainly because they were passing by and store “popped up” in the way, which is reflected in the low relevance and interaction registered on the brand's social networking pages. It is very rare to receive customers who have already, before the first visit, interacted with the brand online or which have heard before about it through social media. The returning customer is the one who came once, liked the service and the products, thought about them and came back to buy, which shows that the purchase is easily feasible and does not limit the consumer's life. Although it was only launched in July, it has not developed sales because the customer is not informed and not attracted. If people do not easily find the page when browsing the search engines and do not know the brand, they will not easily trust it and buy it online: the perceived risk is very high. The only way used to promote the online store was encouraging the sales team to inform the customer of its opening. However, as consumers do not have an inventive or benefit if they use the online store, they forget it.

***“The greatest risk to a company is not to take a risk “(.Richard Marsh, 2003)***

## 3.4. Summary of the problem/Question to be solved by students

After carefully analyzing the case, students are asked to answer questions which will led them to answer the cases main question:

**After analyzing the market and presenting the company's situation, the investor wants to analyse further the information and to ask to some of its questions:**

1) What were the reasons behind the team's choice of a retail business in the market of Consumer Internet-of-Things devices?
2) What are the threats, opportunities and success factors of the market found by Techperks? After analyzing Techperks' strategy and Financial results, which are its strengths and weaknesses? Please analyze those by using a SWOT Analysis and address them with a Dynamic SWOT Analysis.
3) Techperks was a brand created to bring the most innovative IoT consumer products to the Portuguese market. Please analyse the strategy adopted to develop the brand (by using a brand model) and evaluate its implementation by analyzing the marketing-mix.
4) By analyzing the customer journey presented, please identify critical points which can affect Techperks' performance and suggest concrete strategies to overcome those critical points.
5) Please justify the need of the brand to adopt a new online and offline strategy, prioritizing E-commerce development and creating integration between both touchpoints.

## 3.5. Appendix

Appendix 1:

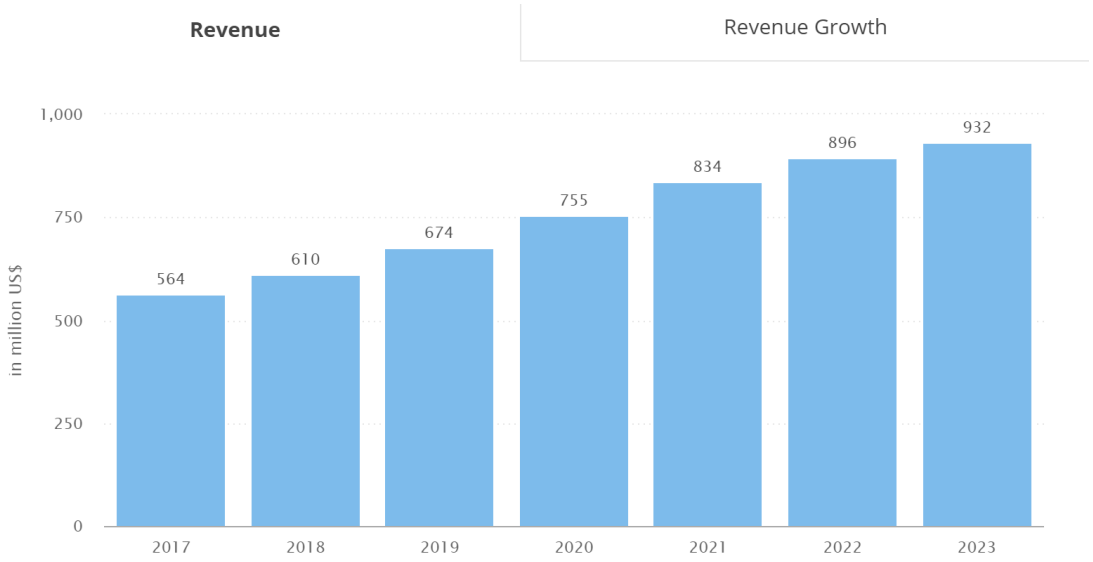



*Figure 18 - Consumer Eletronics in Portugal: revenue* | *Source: Statista, 2019*

Appendix 2:

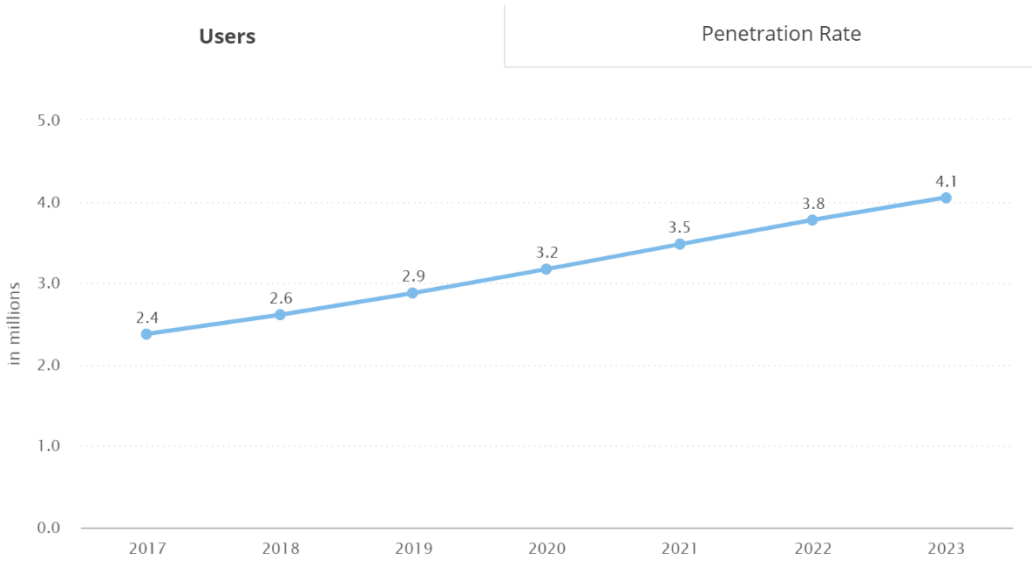



*Figure 19 – Consumer Electronics in Portugal: Users* | *Source: Statista, 2019*

Appendix 3:

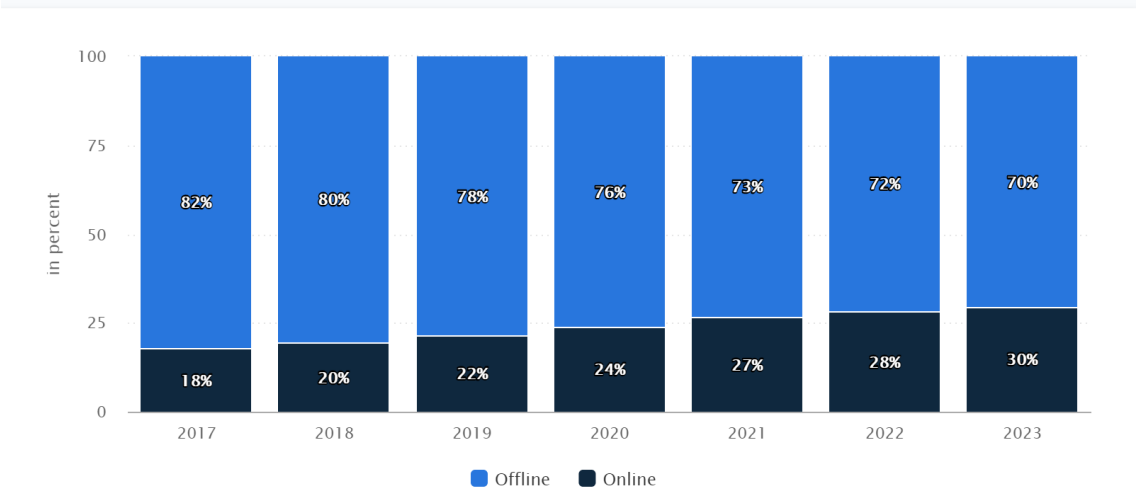



*Figure 20 – Consumer Eletronics in Portugal: Online vs Offline* | *Source: Statista, 2019*

Appendix 4:

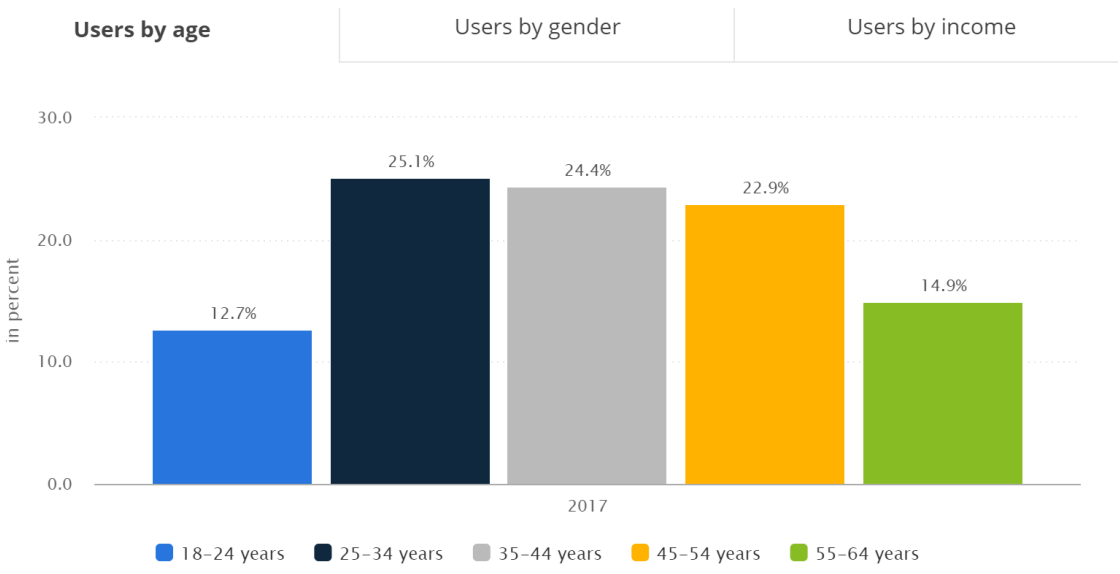



*Figure 21 – Consumer Eletronics in Portugal: Users by age* | *Source: Statista, 2019*

Appendix 5:

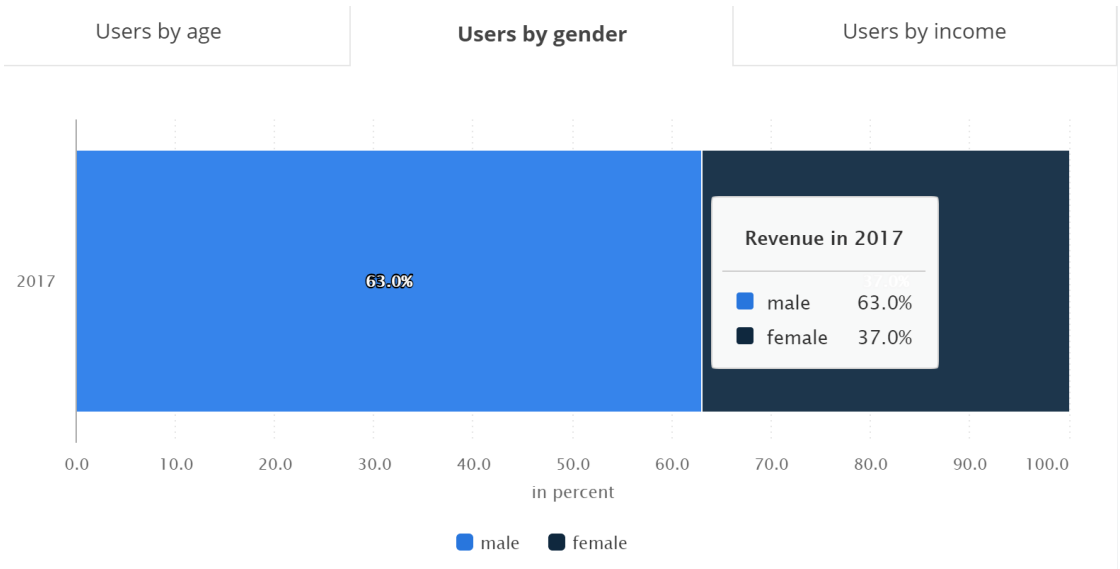



*Figure 22 – Consumer Eletronics in Portugal: Users by gender | Source: Statista, 2019*

Appendix 6:

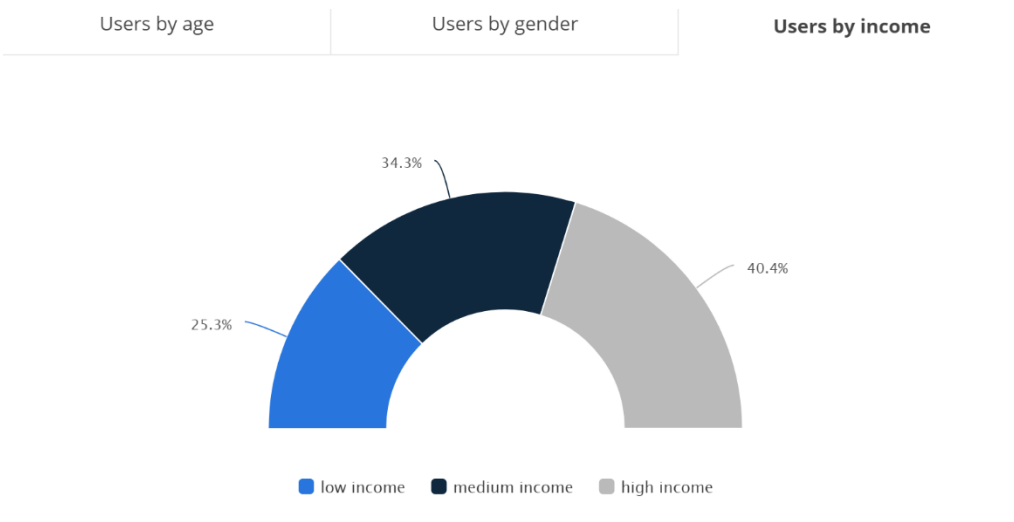



*Figure 23 – Consumer Eletronics in Portugal: Users by income | Source: Statista, 2019*

Appendix 7:

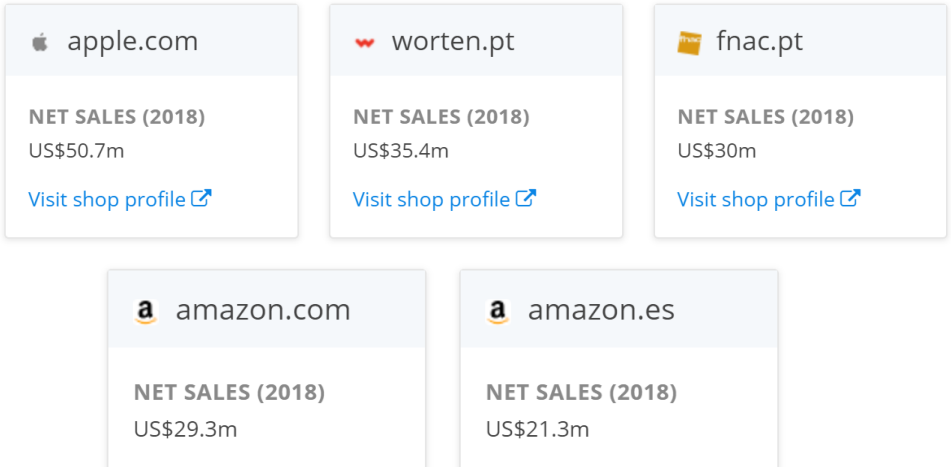



*Figure 24 – Consumer Electronics in Portugal: Biggest Online Sellers* | *Source: Statista, 2019*

Appendix 8:

| ATTRIBUTE | DETAILS |
|---|---|
| **By Component** | • Platform<br>• Solution & Services |
| **By Platform** | • Device Management<br>• Application Management<br>• Network Management |
| **By Software & Services** | • Solution<br>  ◦ Real-Time Streaming Analytics<br>  ◦ Security<br>  ◦ Data Management<br>  ◦ Remote Monitoring<br>  ◦ Network Band Management<br>• Services |
| **By End-Use Industry** | • BFSI<br>• Retail<br>• Government<br>• Healthcare<br>• Manufacturing<br>• Agriculture<br>• Sustainable Energy<br>• Transportation<br>• IT & Telecom<br>• Others |
| **By Geography** | • North America (USA and Canada)<br>• Europe (U.K., Germany, France, Scandinavia and Rest of Europe)<br>• Asia Pacific (Japan, China, India, Southeast Asia, and Rest of Asia Pacific)<br>• Middle East & Africa (South Africa, GCC and Rest of the Middle East & Africa)<br>• Latin America (Brazil, Mexico and Rest of Latin America) |

*Figure 25 – IoT global market segmentation* | Source: Fortune Business Insight, 2019

Appendix 9:

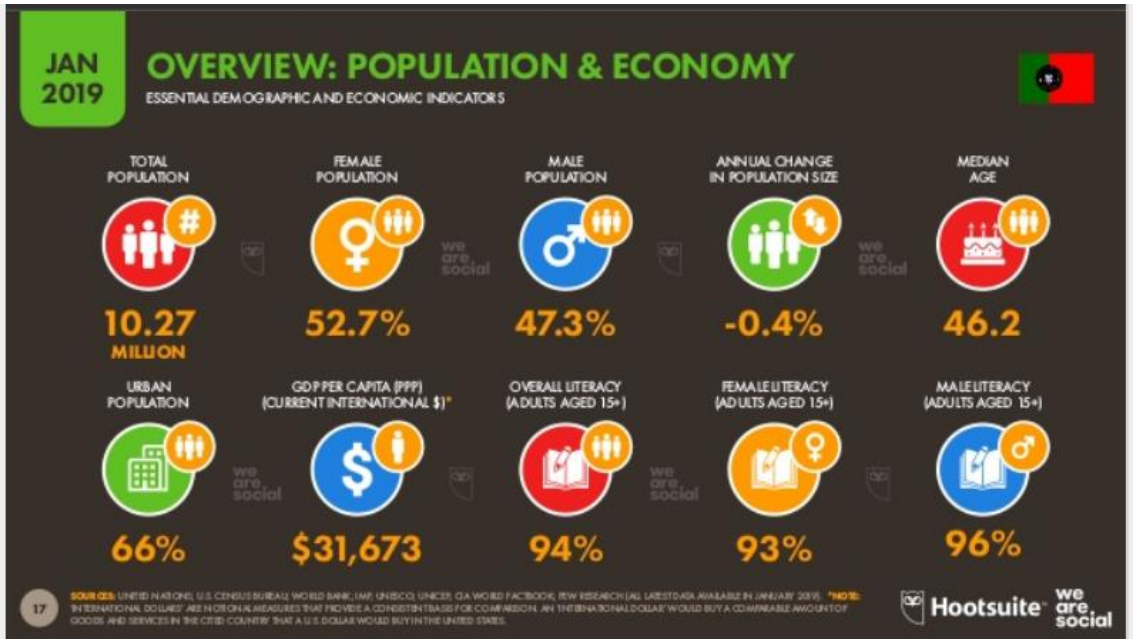



*Figure 26 – Portugal E-Commerce Overview* | *Source: Digital Report Portugal, 2019*

Appendix 10:


*Figure 27 – Annual Digital Growth* | *Source: Digital Report Portugal, 2019*

Appendix 11:

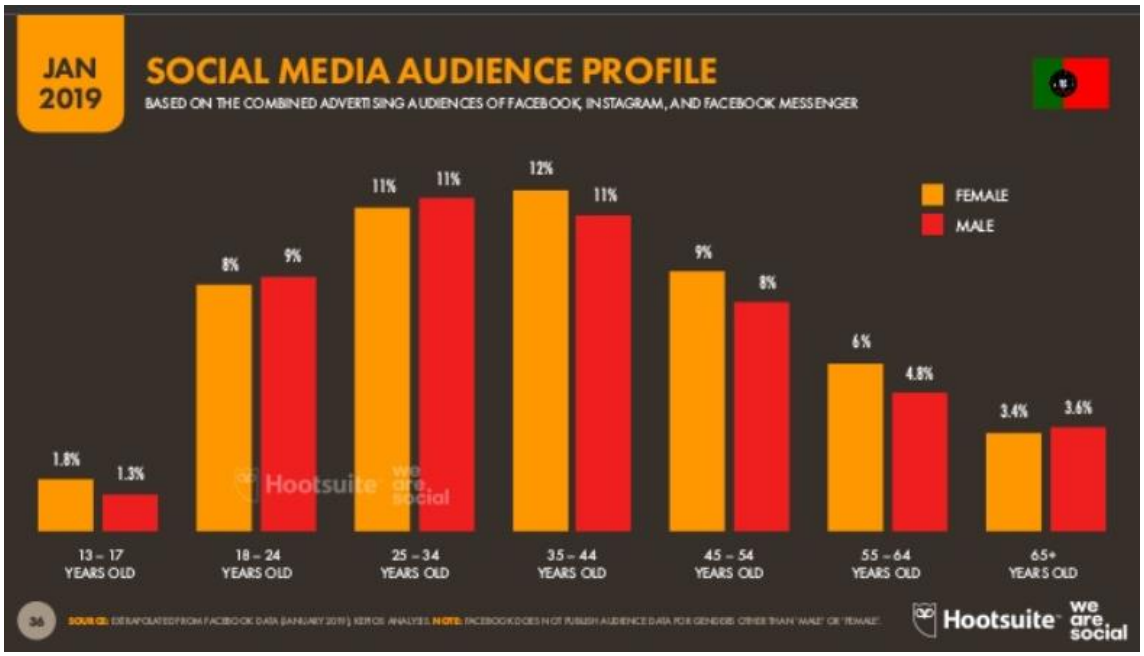



*Figure 28 – Social Media Audience Profile* | *Source: Digital Report Portugal, 2019*

Appendix 12:

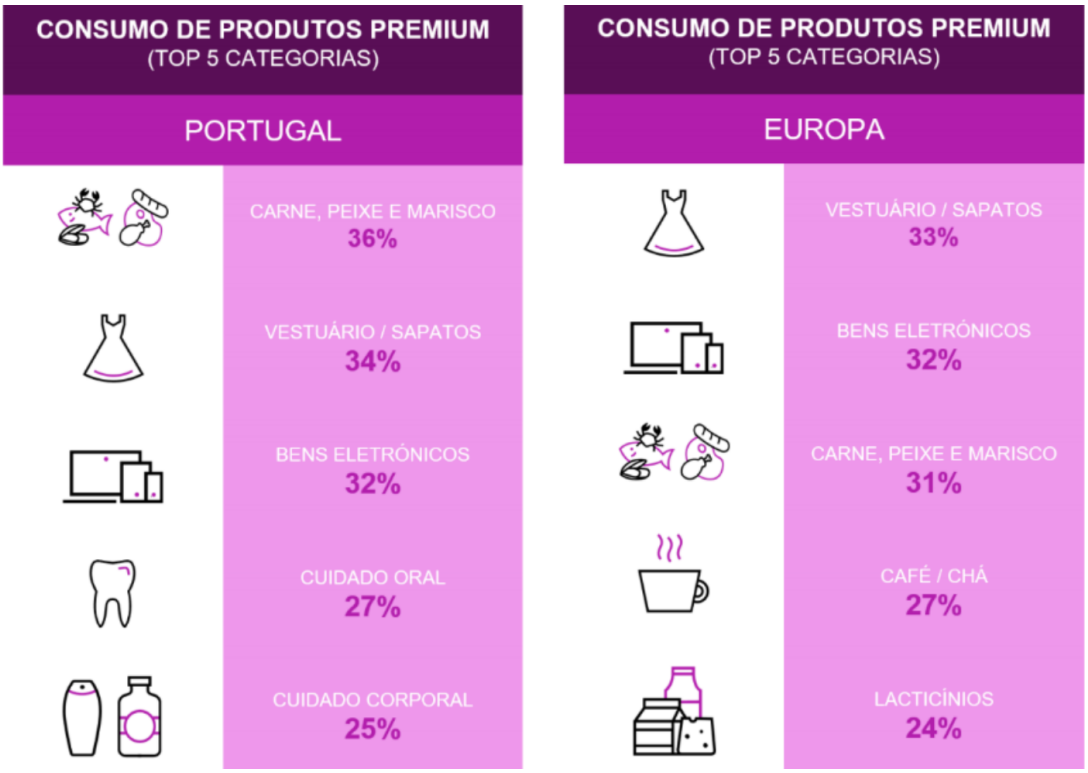



*Figure 29 – Portuguese E-commerce* | *Source: Consumer Changing Prosperity, 2019*

Appendix 13:

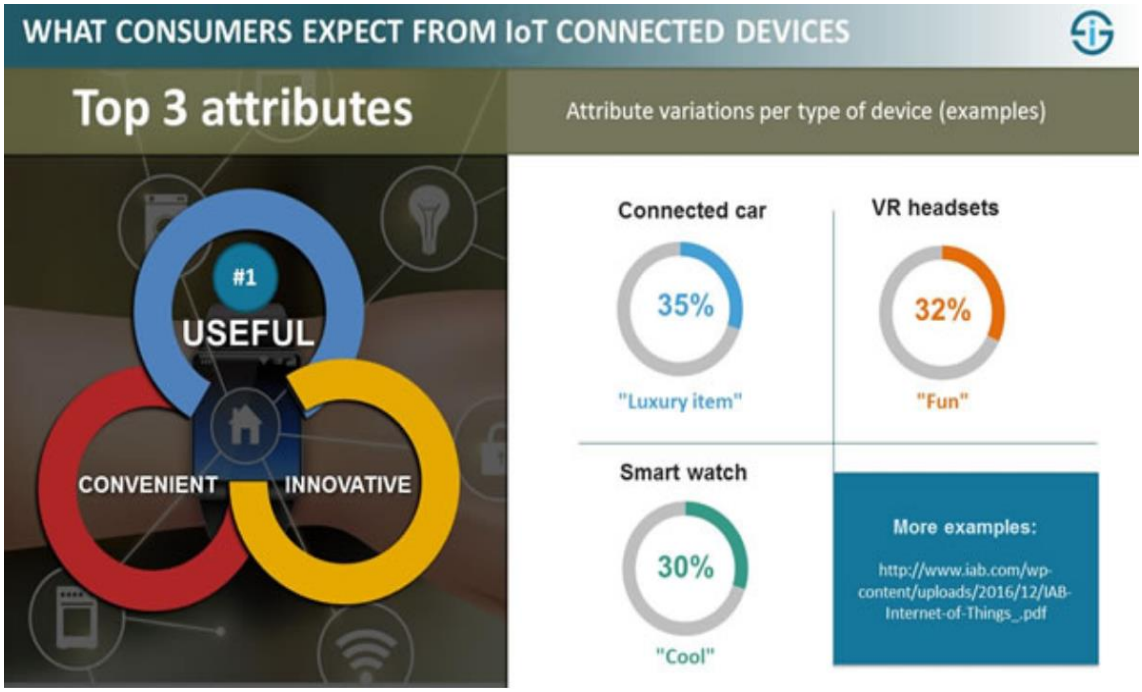



*Figure 30 – Consumer's most valued atrributes* | *Source: IAB, 2016*

Appendix 14:

*Figure 31 to 36 – Techperks physical store* | *Source: Techperks, 2018*

Appendix 15:

- ***Nebula Capsule***

| | |
|---|---|
| *Techperks* | 499€ |
| *Amazon.com* | 469€ |
| *Mercado Espanha (Via Marketplace Fnac)* | 506,25€ |
| *PCDIga* | 499€ |

Table 5 - Price Comparison

- ***Nutspace Mini***

| | |
|---|---|
| *Techperks* | 16€ |
| *Amazon.com* | 12,99€ |
| *Gearbest* | 9,88€ |


Table 6 - Price Comparison

- ***Camera Argus 2***

| | |
|---|---|
| *Techperks* | 176€ |
| *Amazon.com* | 119,99€ |
| *OLX* | 145€ |

Table 7 - Price Comparison

# IV. Pedagogical Case

## 4.1. Target of the case

This case was design to be answered by undergraduate or Master students, who seek to learn more about business strategy and startup environment and may consider the case as an interesting object of study. Lecturers or trainers will found in this case a real business situation, which can be used as a tool to be used in classroom and to help subtends to better develop a pragmatic and critical sense such as to understand the impact of Internet-of-Things in marketing and other fields. Entrepreneurs will also found usefulness in the reading of the case, once it may be seen as a guide to develop a strategy for a new business and a manual of best practices. Those working in the technological marketing or seeking to find a new business purpose will find relevant and practical information, which can be used as a source of ideas and inspiration. Readers who are keen on Internet-of-Things and technology, may understand some more and find information regarding trends and evolution.

## 4.2. Pedagogical Objectives

This case serves the main purpose of diagnosing critical aspects about Techperks strategy and use it as a case study to elucidate readers about the challenges of opening a new startup business and to deal with them. As described in the case, many startups fail in the first year of business, and very often are not aware of reasons causing the failure and do not see the signs when it is still possible to make changes. At a glance, the case will lead the students in a so called “business plan” and explore recommendations to repositionate Techperks’ business, but also fulfil the following objectives:

- Understand the numbers behind the “technological fever”. We all have seen how important technology is becoming but it also important to understand the market’s environment and to know its structure and value;
- Learn how to perceive threats and opportunities in the technological industry;
- Learn about a very interesting segment of the technological sphere – Internet of Things – and its impacts on people lives.

- Comprehend the positive and negatives aspects regarding technology use and how consumers perceive those aspects, such as the perceive risk about security and privacy;
- Understand the correlation between technology and marketing and comprehend how marketing can benefit from the use of Internet-of-Things;
- Analyze barriers of Portuguese consumption regarding Internet-of-Things consumer products and design strategies to overcome those barriers;
- Deepen knowledge about a real small company, which integrates 99,9% of the Portuguese business fabric, and to understand the limitations of a small business;
- Develop tools to understand the importance of protecting competitive advantage and pursuing differentiation strategies;

## 4.3. Literature Review

### 4.3.1. IoT Definition

With recent advances in internet technologies, Internet of Things (IoT) technology is having an increasing impact on our daily lives, starting to offer interesting and advantageous new services and reaching new economy sectors (Gao and Bai, 2014). The term Internet of Things (IoT) was coined in 1999 by Ashton (2009), a British technology pioneer who helped develop the concept while exploring a new solution for supply chain management systems of P&G (Gubbi *et al.*, 2013; Gao and Bai, 2014).

Without technically specify, it can be defined as a set of interconnected things (humans, tags, sensors, and so on) over the Internet, enabled to measure, communicate and act all over the world (Díaz *et al.*, 2016). The core purpose of this technology field is to better get information about the environment, so it can be understood and applied accordingly. Internet of Things can be analyzed from three paradigms: internet-oriented, things oriented or semantic-oriented (Atzori, 2010; Gubbi, 2013). A simple search in a public space or a crowded mall will highlight the main strains of internet of things – its strong influence on a myriad of aspects of daily life and behaviours of potential users. If analyzed from a private user perspective, the most common effects of IoT are reflected in the way of working and living (Atzori, 2010).

The reader has had already heard of robotics, smart cities, wearables or app-controlled devices (Chuah *et al*, 2016). This clearly states how IoT is no longer something coming but how it is already something well imbedded in the present in our lives, ranging from the professional to the personal use. Those are only a few examples of possible application scenarios in which the new paradigm will play a leading role in the near future.

### 4.3.2. IoT and Marketing

Now that the IoT universe has become clearer to the reader, which is now more contextualized in terms of definition, structure and market information, is of extreme relevance start interconnecting it with marketing and the case itself. Tech Perks is a small retailer of IoT devices, however is not taking advantage of the use of its on products to invest in marketing efforts. As seen above, IoT represents an important and advanced method of more efficient collection and analysis of information, of any kind: either technical or user-generated. But are other important uses of this generation of technology for marketing, how can these two areas be connected?

Internet of things is a thrilling concept because it brings intelligence of the Internet to physical product, thereby making all products more connected and smarter (Hoffman & Novak, 2015; Nguyen & De Cremer, 2016). Some of the most relevant authors analyzing critically the impact of IoT in the different marketing subjects were Balaji and Kumar (2017) and Nguyen and Simkin (2017).

The first paper, by Balaji and Kumar, entitled 'Value co-creation with internet-of-things technology in the retail industry' (2017), explores the way customer experience is changed by the use of IoT when shopping in a retailing concept. It was possible to find that the use of smart devices during shopping journeys would be perceived as co-creation, and that it would influence customers' continuance intentions and word-of-mouth intentions.

Later, the paper 'The internet of things and interaction style: the effect of smart interaction and brand attachment', by Wu, Chen, and Dou, develops and examines the effect of two different interaction styles (e.g., friend-like and engineer-like communication) on consumers' brand perception using two laboratory experiments. Their study suggests that a smart interaction style in the Internet of Things (IoT) context can improve consumers'

perceptions of brand warmth and brand competence, and that these perceptions enhance the consumers' emotional attachment to the brand (Nguyen and Simkin, 2017; Wu, Chen and Dou, 2016).

The results seem to point out that friend-like communication have stronger effects when determining brand warmth, while both type of interactions equally influence the perceptions of brand competence. Both perceptions of brand warmth and brand competence have a positive effect on enhancing consumer's emotional attachment to the brand.

The studies are still very limited and reduced, but some important conclusions have been directing the readers in the way that marketing efforts efficiency is enlarged by the use of IoT technology. Therefore, brand equity may importantly be enforced with use of this technology during customer's journey. This will be a key starting point to help solve Tech Perks notoriety problem.

### 4.3.3. The Consumer behavior towards IoT products

#### 4.3.3.1. Technology Acceptance Model

In the case of Tech Perks, it has been assumed that the problem of low sales has been majorly caused due to a problem of communication, marketing investment and a low notoriety in consumer's minds. However, the problem may also be related with the fact that consumers may not be ready to embrace this new technology, may not be prepared to this type of innovation.

Adoption can be seen as the level of acceptance and continue of use of a product, service or an idea (Sathye, 1999; Topf, 2018). Rogers and Shoemaker also refer to adoption "as the degree to which consumers adopt a new product earlier than consumers in their social system" (Rogers & Shoemaker, 1971; Topf, 2018).

According to Rogers (2010), consumers experience 5 key phases during their decision making process to adopt or reject a product 5 key steps: awareness, interest, evaluation, trial and making. An opposite movement was described by Hall and Khan in 2003. To the authors, the decision is not about adopting or not adopting, rather about adopting now

or delay the adoption for later. User acceptance toward a technology is the major determinant of actual usage behavior (Yi *et al.*, 2006). Therefore, is relevant to inform he reader a little more of one of the most important theoretical models regarding technology: the Technology Acceptance Model (TAM). TAM suggests that two variables, perceived ease of use and perceived usefulness, are significant determinants of behavioral intention to use a system/technology (Davis, 1989; Chau and Hu, 2001; Svendsen *et al*., 2013; Gao *et al*, 2014). Specifically, perceived usefulness is defined as the degree to which one believes that using the technology will enhance his/her performance (Davis *et al.*, 1989; Gao et al, 2014). Perceived ease of use refers to the degree to which one believes that using the technology will be free of effort. TAM also proposes that perceived ease of use can explain the variance in perceived usefulness (Gao and Xai, 2014).

Indeed, TAM has proven to be a unparallel model with high explanatory power of the variance in users' acceptance related to IT adoption and usage across a wide variety of contexts (Ha and Stoel, 2009; Park *et al*., 2009; Gao *et al*, 2014)). In the paper "A unified perspective on the factors influencing consumer acceptance of internet of things technology", Gao and Xai (2014) argue that certain extensions to the TAM model are required to explain the acceptance of IoT technology. Some research, particularly in marketing area, have indicated that some other factors such as beliefs about enjoyment, trust, social influence and perceived are key factors influencing consumer acceptance of new technology (Childers *et al*., 2001). Thereby, the authors developed an integration of the TAM model with those other factors appointed as also influencers, drawing a broader and more holistic picture of the drivers of consumer acceptance of IoT technologies compared to previous research. The study addressed the gap in the literature by identifying social influence, perceived enjoyment, and PBC, as the three additional antecedents of consumer acceptance of IoT technologies, as the reader will find in the next chapter.

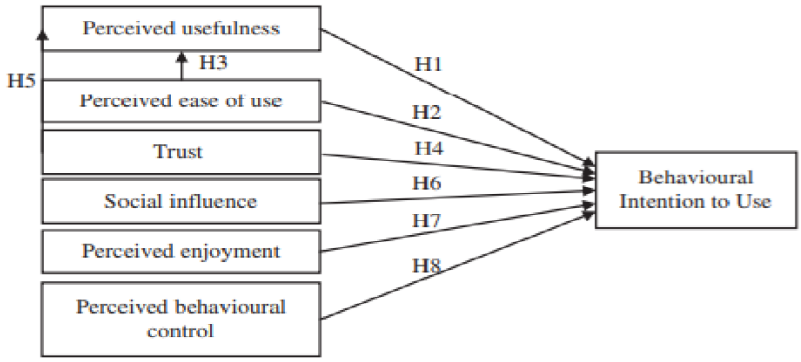



*Figure 37 – Technology Adoption model | Source: Gao and Xai (2014)*

The results of the study showed that a consumer's perceptions of usefulness, ease of use, behavioral control, enjoyment, and social influence are predictive of his/her intention toward using IoT technologies. This supports prior TAM research finding usefulness to be the primary determinant of one's use of a technology while ease of use, and enjoyment are secondary determinants (Davis, 1989; Davis *et al.*, 1989). Trust, on the other hand, point to be an insignificant determinant of adoption.

#### 4.3.3.2. Internet of Things Acceptance Model

IoT technologies have been given wide attention and had the large number of applications in many fields (Schlick *et al.*, 2013, Gao *et al.*, 2014). The Technological Acceptance model is widely spread and accepted among authors, however it only takes into consideration two types of user beliefs – perceived usefulness and ease of use – thereby ignoring the effect of other aspects such as social influence or the resources and competences which also support a possible purchase (Ajzen, 2011; Venkatesh et al. 2012; Gao *et al.*, 2014). Thus, Gao *et al*. 2014 explored in "A unified perspective on the factors influencing consumer acceptance of internet of things technology" (2014, p.1) the need to extend to model to include additional variables to explain the use of IoT technology, by testing if the variables perceived usefulness, perceived ease of use, trust, social influence, perceived enjoyment, and perceived behavioral control positively affect behavioral intention toward the use of IoT technologies.

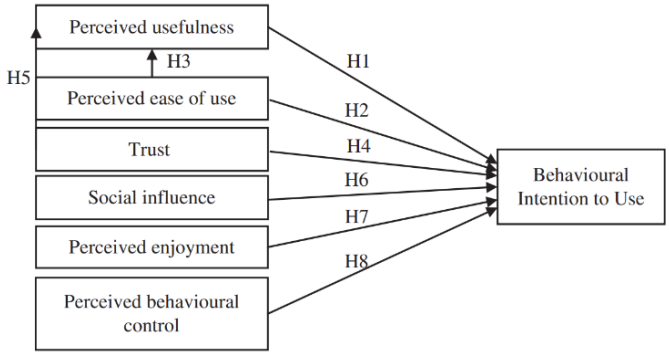



*Figure 38. – Internet of Things Adoption model | Source: (Gao, 2014)*

The results pointed strong correlations between perceived usefulness, perceived ease of use, social influence, perceived enjoyment, and perceived behavioral control. However, contrarily to what one may think, trust played an insignificant role in predicting the adoption. Trust is, indeed, more relevant in its effects on perceived usefulness, along with perceived ease of use. In the same study, it was also possible to find evidence that the variables with the greatest effect on Behavioral Intention of Use were Perceived Usefulness (0,67), Social Influence (0,52), and Perceived Ease of Use (0,44). In comparison with the individual Technology Acceptance model, Gao et al. model provides more explanation on user behavioral intention toward IoT usage.

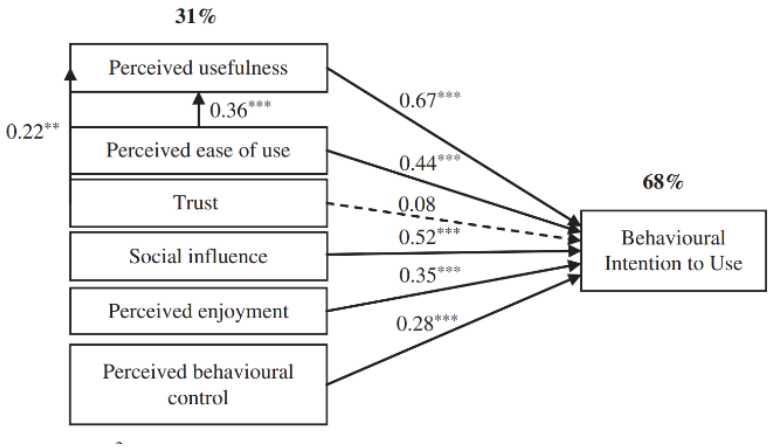



*Figure 39. – Internet of Things Adoption model | (Gao, 2014)*

#### 4.3.3.3. Consumer Adoption Barriers towards Smart Devices

The growth of IoT will raise challenges and barriers. It is common to find relevant research and publication stating how big IoT can became in our lives. However, it is also common to read that unexpected barriers have aroused when it comes to consumers' adoption. In order to achieve the expected success, the industry and correspondent manufacturers must pay attention to consumers' concerns (Toft, 2018).The expected growth implies the importance of understanding the technologies and knowing why consumers adoption of IoT devices is developing slower than expected. It is not to possible to ignite customers' growth without deeply acknowledging what are the needs behind the adoption and demand (Topf, 2018).

Attitude towards adopting a new technology suffers influence from the customers' beliefs about the consequences of adoption, and thereby, from its evaluation (Topf, 2018).

Topf, in 2018, conducted a study to understand the impact of personal traits and situational barriers in the process of consumer adoption. To obtain answers, the author focus was to understand which situational factors and personality traits can constitute barriers. The variables under study were:

- Risk
- Knowledge
- Uncertainty
- Network Effect
- Security
- Dependence
- Intrusiveness
- Price
- Self effiency
- Value perception
- Novelty

The individual traits were measured using the Technology Readiness Index (TRI) methodology, adopted from Rojas-Méndez, Parasuraman, and Papadopoulos (2017). TRI consist of four subscales, namely optimism, innovativeness, discomfort, and insecurity.

The findings showed different perspectives according to two different consumers clusters: *Smart Devices Likers* and *Smart Devices Lovers* (clustered according to 7 variables:

privacy concern, collection, unauthorized secondary use, improper access, intrusiveness, dependency, price, novelty and perceived value). *Smart Devices Likes* perceive the use of the devices as is advantageous (value perception), attractive (value perception), easy to use (ease of use), and they assume self-knowledge about how to use technologies (self-efficiency). The consumers in this group have a positive vision of technology and have a tendency to feel knowledgeable about technologies issues. Results also support that they tend to feel insecure and discomfortable when using smart devices. *Smart Devices Lovers* consider the use of smart devices advantageous, attractive, easy to use and they use them with self conscience about its functioning. They consider the price fair and the products uncommon and novel. In terms of personal traits, they see technology as positive, they feel comfortable and secure when using it but they are less innovative than the *Smart Devices Likers.*

In line with previous research, price (Balta-Ozkan *et al*., 2013; Björnsjö *et al*., 2016; Mani & Chouk, 2016; Nakyung & Kim, 2015), dependency (Licoppe & Heurtin, 2001), as well as privacy and security (Björnsjö *et al*., 2016; Gubbi *et al*., 2013; Hsu & Lin, 2016; Malhotra *et al*., 2004; Miorandi *et al*., 2012; Ziegeldorf *et al*., 2014) were variables, already mentioned by other researchers, which contribute to consumer's resistance towards adoption in both groups. However, when it comes to privacy and security, the groups demonstrated distinctive behaviors. The *Smart Devices Likers* were concerned with every aspect regarding Security and Privacy. *The Smart Devices Lovers*, only manifested concerns regarding two specific aspects of Privacy and Security: for unauthorized secondary use and improper access (neglecting thereby aspects as data collection and threats).

To summarize, the barriers against IoT adoption depend on the personality groups. In the *Smart Device Likers*- older, employed, knowledgeable about technology, secure and risk tolerant - the biggest barriers are concerns related with privacy and security, price and the dependence. When it comes to *Smart Devices Lovers* - characterized by young consumers, normally students and females, who see smart devices as attractive and very advantageous, have strong purchase intentions and not have problems using technology - the biggest adoptions barriers are only related to privacy and security concerns, namely about the unauthorized secondary use and the improper access of data.

*Summary of barriers and other characteristics explaining the two clusters*

| | Smart Device Likers | Smart Device Lovers |
|---|---|---|
| Barriers | Collection (privacy and security)<br>Unauthorized secondary use (privacy and security)<br>Improper access (privacy and security)<br>Privacy and security concerns<br>Price<br>Dependency | Unauthorized secondary use (privacy and security)<br>Improper access (privacy and security) |
| Other characteristics | More older consumers<br>Some employees<br>They are knowledgeable regarding SD<br>SD do not have much risk<br>Not insecure when operating a SD<br>Owns 4 SD on average | Young consumers<br>Many students<br>Many women<br>The network effect is very good<br>SD is very advantageous<br>SD is attractive<br>High positive WOM<br>High purchase intention<br>Do not have problems with the use of SD<br>Owns 4 SD on average |

*Figure 40 – Barriers and characteristics affecting IoT adoption | Source: (Topf, 2018)*

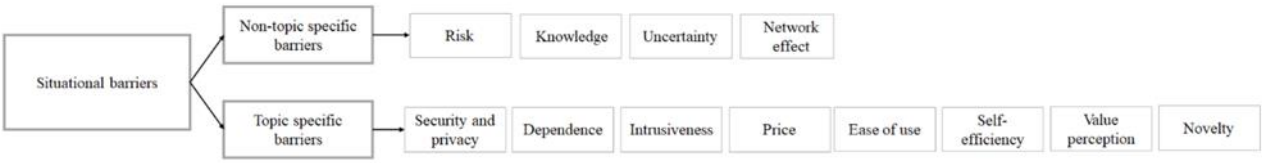



*Figure 41 – IoT adoption Barriers | Source: (Topf, 2018)*

### 4.3.4. Customer Experience using Technology

As seen above, one important determinant of consumer's IoT adoption is the perceived enjoyment. Perceived enjoyment as a major intrinsic motivation has been found to drive users to adopt a new technology (Bruner and Kumar, 2005). It is defined as the extent to which the activity of adopting IoT technologies is perceived to be enjoyable, in its own right, apart from any performance consequences that may be anticipated (Deci, 1971). When the use of IoT technologies can bring fun and pleasure, users will be intrinsically motivated to adopt them. Evidence from previous studies has shown that enjoyment of

shopping is regarded as an important determinant of why consumers shop (Doolin *et al.*, 2005; Lu and Su, 2009).

Facing user perceived enjoyment as an important determinant of consumer adoption, it is important for Tech Perks to adopt a more pleasant and fun shopping environment. Giving the store format of a pop store, the space of customer interaction is very reduced, thereby turning the moment of pleasure and enjoyment very reduced and limited to customer service and simple product trial. Besides, the brand has never organized events or brand activation moment, which would increase the enjoyment of the customer, the notoriety towards the brand or increase the average time spent per visit. All these aspects are all correlated under an important umbrella: customer experience, physical or online. According to Meyer and Schwager (2007), customer experience refers to the internal and subjective response customers have to any indirect or direct contact with a company. While indirect contacts involve rather unplanned encounters with a firm, direct contacts occur in the course of purchase and use of products and services (Meyer and Schwager, 2007). Companies are recognizing the importance of delivering an experience that makes them stand out from their competition. It could be interesting to see Techperks developing more creative and dynamic customer experiences. Given the product type, the potential to innovate and to surprise are varied, and could help the brand to dynamize more sales.

### 4.3.5. Omnichannel Strategy

Consumers are changing are a high-speed rate, and brands have two options: develop competences to adopt the change or rapidly turn obsolete. Consumers trade today do not purchase only a product or a service, but mainly an experience, which explains how costumers choose brand which can offer them unforgettable experiences in multiple touch points. (Minsker, 2014; Sluis, 2014; Sousa, 2016). If before consumers were only at on single channel, today they are present in multiple, such as in social media and mobile devices (Minsker, 2014; Sousa, 2016). What was then a single channel strategy has turned today a multichannel model, prepared to supply multiple touch points, interact and contact with the consumers (Jamison, 2013; Frazer & Stiehel, 2014; Sousa, 2016). Nonetheless, the model rapidly evolved, due to multi-channel model's limitations in answering to key questions such as customer management or and the integration of different times of commerce in the varied channels (Neslin *et al*, 2006). Thereby, several sellers started to

offer customer different ways to combine purchase and delivery in different market channels, in a strategy named after cross-channel (Sousa & Amorim, 2009). However, this strategy rapidly evolved to an omnichannel strategy (Frazer & Stiehler, 2014; Jamison, 2013; Verhoef *et al*., 2015; Sousa, 2016). Omnichannel is a recent concept, not yet consensual among authors, different in terms of consumer journey and also in how companies empower customers and match their expectation (Driscoll, 2013; Webster, 2014; Mark, Bulla, Niraj & Bulla, 2014). Omnichannel is a recent concept, not yet consensual among authors, different in terms of consumer journey and also in how companies empower customers and match their expectation (Driscoll, 2013; Webster, 2014; Mark, Bulla, Niraj & Bulla, 2014). Omnichannel means to purchase by using multiple available channels, physical or digital, offered by the seller (Mark *et al*., 2014; Mayne, 2014; Haire, 2015). The main difference is with the ability for customers to move freely and simply between the interface, mobile devices and the physical store in such a way that the route of customer in a purchasing process is consistent, providing them with a unified experience, regardless of the channels used (Piotrowicz & 14th Cuthbertson, 2014; Liebmann, 2013; Jaminson, 2013; Haire, 2015; Pophal, 2015; Frazer & Stiehler, 2014; Verhoef *et al.*, 2015; Shoulberg, 2014; Fulgoni, 2015). It is a way to replicate an experience physically or digital, interconnecting it with network and give the customer the real opportunity to choose and to purchase.

## 4.4. Presentation of the analytical tools

This section reserves the presentation of important models or tools that may be relevant to guide students in resolving questions. As such, the goal is to answer the central question: how to turn the potential losses and failure of Techperks into successful businesses? For this, it is important to use analysis models that help the respondent to summarize the information collected in the case and that allow to answer objectively the questions presented in Section 3.4. Therefore, respondents should optimally combine both quantitative tools, based on objective and numerical information and qualitative tools, more focused on considerations and market trends.

### 4.4.1. Quantitative Analysis

The quantitative content of the case is provided when describing the Information and Communication Technologies (ICT) market, the Consumer Electronics market and the Internet of Things market. Trends and reports regarding users behavior are also expressed with percentages. Lastly, all the information regarding the financial performance of the brand is quantitative.

The reader may use:

- Environment-data: Consumer Electronics revenue, E-commerce revenues, E-commerce customer behavior, product categories performance, consumer behavior analysis, trends and segment analysis;
- Company-data: Financial performance and KPI'S.

To better compile these categories of information, the respondent can use as a source of information the following points:

- Statista – A global information platform, where thousands of statiscal reports are compiled and organized by thematic;
- Global digital report – A report prepared by the organization We are Social globally and per country, which revels the digital use statistics such as the number of users for Social networks, digital consumption, among others;
- INE – National Statistics Institut – Portuguese public organization, which publishes online statistical reports about varied economic and social indicators;
- Data and reports published by Techperks.

### 4.4.2. Qualitative Analysis

The qualitative tools will help the reader to fully comprehend the case scope. Trends and further information regarding the environment of a firm but also the internal analysis are expressed through qualitative data. Therefore, it is of extreme importance to combine

quantitative and objective information with qualitative sources, which auxiliates the reader to understand beyond the numbers.

The most relevant sources of qualitative information:

- Environment-data: Mediate and immediate analysis, consumer behavior, industry's experts' opinions, supplier environment, competition analysis;
- In-company data: History and strategy, expertise, company's past experiences, business model, positioning, competition.

To fulfil these information categories, the respondents may inquire:

- Information published by Techperks, online or physically;
- Industry Analysis – available in the case;
- Business Model analysis – The Canvas Business Model;
- Trends Analysis – available in the case;
- Literature Review;
- Consumer Behavior.

### 4.4.3. Main frameworks and analytical models

To better fulfil the purpose of the case, it is important to respondents to use detailed analytical tools, quantitative of qualitative, which auxiliates them to answer the questions and led them to obtain meaningful and useful conclusions, applied to the case but also extendable to other firms. The readers are invited to use the tools listed below but also to complement it with others also suitable which will contribute to deeper into the case analysis. Here, are presented those commonly lectured in business schools:

- PEST Analysis
- SWOT Analysis
- Costumer Journey Model
- Industry Analysis
- Key Brand Model
- Marketing-Mix;

### 4.4.4. Summary

A successful resolution of this case is one that uses all the information available in the case, analised in the light of the literary review and which through analytical and additional tools can objectively answer the questions, relate different topics and differ conclusions and assertive recommendations for Techperks repositioning, thereby answering the case main question: *"How to turn innovation startups into successful businesses?"*.

The steps for success are:

4.5. Analyze profoundly the information presented in the case study (Section II);

4.6. Understand the questions to be solved and create answer objectives for each one;

4.7. Read carefully the Literature Review and find guidance and theoretical knowledge which will serve as ground floor to answer the questions;

4.8. Use analytical tools, quantitative or qualitative (those suggested and additional to complement) to mine the data and to drive conclusions;

4.9. Interpretate and resolve the questions and commit to deliver meaningful and suitable recommendations;

## 4.5. Animation Plan

| SESSION | DURATION | OBJECTIVES | ACTIONS | SUPPORT MATERIAL |
|---|---|---|---|---|
| 1 | 90 | • Introduce the thematic about technology and Internet-of-things<br>• Capture student's interest<br>• Inform the students about case study resolution<br>• Highlight case study's relevance | ***Lecturer:*** Conduct an interactive session with students about technology and its impact in consumers, by asking their opinion;<br><br>**Lecturer:** Play HP's video "How IoT Will Bring a More Connected Future" and apply questions presented in the chapter "Animation questions"; Link: https://www.youtube.com/watch?v=oyr42MzQunE<br><br>***Lecturer:*** Delivery of the case study to the students;<br><br>***Lecturer:*** Presentation of the case study, presenting it in general and presenting the objectives of resolving it;<br><br>***Lecturer:*** Read the questions to be solved;<br>Split the classroom into groups from A to E, with and attribute one question to each group to prepare and present in the following class.<br>Give space to questions. | PC, Columns, Wifi |
| **Homework** | | • Prepare the case and read the questions<br>• Prepare the session | Prepare a power presentation with the correspondent question resolution;<br>Organize session's agenda, defining presentation order and moments of discussion;<br>Organize dicussion dynamics and develop interactive moments between groups | |

| | | | | |
|---|---|---|---|---|
| 2 and 3 | **90 - 135** | • Present the agenda and the group presentation order;<br>• Highlight the case study's most important points and establish time for every presentation;<br>• Discuss the proposed answer to each question with every group;<br>• Test the attention of groups when the other groups are presenting;<br>• Stimulate critical sense and pragmatic vision;<br>• Evaluate the groups by asking every group to evaluate the other groups. | ***Lecturer:*** Read question 1 to 5, highlight the main points of the case and review again the objetives of the study;<br>***Group A:*** Presentation of Question 1;<br>***Lecturer:*** Comment the presentation and its content and initiate discussion by using Animation Questions to inquire the other groups;<br>***Group B:*** Presentation of Question 2;<br>***Lecturer:*** Comment the presentation and its content, ask Group E to comment the answer and propose additions or alterations;<br>***Group C:*** Presentation of Question 3;<br>***Lecturer:*** Comment the presentation and its content, ask Group D to prepare and ask two question to Group C regarding Question 3 presentation.<br>***Group D:*** Presentation of Question 4:;<br>***Lecturer:*** Comment the presentation and its content, read the proposed resolution (Section 3.7 of this case) and identify divergent points;<br>***Group E:*** Presentation of Question 5<br>***Lecturer:*** Comment the presentation and its content, asks group A to give two extra recommendations to improve Techperks' financial performance.<br>***Lecturer:*** Comment the presentation and its content, aks group B to give two examples of brands with strong omnichannel strategies; | PC, Columns, Wifi, Evaluation Forms |

| | | | | |
|---|---|---|---|---|
| | | | ***Lecturer:*** *Request groups C to present a summary of the case study, key learnings and a final recommendation about the brand;*<br>***Lecturer:*** *Request evaluation of every group about all the groups individually, from 10 to 20.* | |
| 2 and 3 | **90-135** | • Evaluate the written revolution of case study questions and evaluate attendant's comprehension | ***Lecturer:*** Requests every student the individual written delivery of three questions of the case, within two weeks from the request. | |
| **Homework** | | • Review the case study, answer by written three questions and consolidate information; | Review appointments, notes and communicate with the other groups to collect the resolution of all the questions to be used as a guide to the written resolution; | |
| **Grading** | | • Evaluate reports | **Total individual grading** = 50% * Individual report grade + 35%* Presentation + 15% Participation (0-20)<br>**Individual grading =** (Q1+Q2+Q3)/3 | |

## 4.6. Animation Questions

Animation questions are used to set the ton of the session and to stimulate session's dynamics. They also play an important role to approach through a scope of themes and to help the audience to interact and maintain interest about the discussion. Aditionally, are used by the host (lecturer, manager, orator) to assess audience's engagement and motivation towards the session. Those type of questions should be adequate to the audience, the host and the purpose of the election. When conducting a practice-oriented session, it is important to apply questions which are also more oriented to practical content. The following questions are organized according with a funnel structure, ranging from a broad scope to a more specific and related questions, which require prior knowledge and presupposes the reading of the case.

- Which words come to your mind when thinking about digital transformation?
- How does digital transformation affect our daily lifes?
- Regarding the Digital Transformation, I want to play a video, published by HP, named "How will IoT bring a more connected future? Who here has already heard about IoT?
- What is for you IoT – Internet of Things?
- (After watching the video) – Which ones of these products, showed during the video, do you think are not yet produced and available on the market?
- Connected devices are part of Internet-of-Things. Who here has a smartwatch, or a wearable device?
- We are used to hear about IoT and think about it has something complex and distant, but almost all of us already owns a smart product or device.
- In your opinion, how can new business models profit from Internet-of-Things?

- Is the environment in Portugal prepared to embrace IoT and to support new startups who want to open a successful business with Internet of Things as the main focus?
- Where would you go to buy a IoT consumer device? Would you buy it online or at a physical store?
- In terms, of technological specialization, who are the most specialized retailers in Portugal?
- Regarding the consumer behavior, what do consumers look for when buying such a device?

## 4.7. Case Resolution

**1)** *What were the reasons can justify the team's choice of a retail business in the market of Consumer Internet-of-Things devices?*

In *section 2.3.4.*1, we find that the investor of Techperks wanted from the beginning to invest in the technology market. The investor - Ammar Lababidi, worked as sales director for the giant HP, which has in its DNA all the contact with technology. Therefore, one of initial reasons why to choose a technological market, was due to the investor's great experience in the area. Across all the technological areas within the technological world, such as Artificial Intelligence or Big Data, Internet-of-Things proved to be one of the most game-changer, with greatest growth. As seen on *Section 2.3.1*, the global IoT valued in 190 billion dollars 2018, and it is expected to grow in the future at a rate of 24,7%. The global IoT device market was last year evaluated to value 31, 6 billion dollars and it is expected to grow at a 23% CAGR.

According to the *Tech Trains 2017: The Kinetic* Enterprise report published by Deloitte, companies and their leaders must move away from the "promotional noise" that surrounds new technologies and trends and focus their energy on understanding. business ecosystem, namely customers, partners, competitors, etc.). According to Nuno Carvalho (Deloitte's responsible partner for Technology Consulting), "it's not about keeping up with all the innovations that emerge, but about translating the potential of emerging

technology into a set of priorities that have a tangible and measurable impact on their business." When matching Deloitte's with the information granted in the case study, one can find similarities. The technology market is wide and complex. It includes many submarkets and it is easy to be lost in terms of which direction to follow. Techperks investor saw the in the digital revolution a new opportunity to find a new business and used its former experience to guide his judgement. Without technical knowledge or background, was difficult to find a business based on a new product or technology, which could compete with the biggest global market places.

Therefore, the retail option appeared attractive. As seen in *section 2.3.1.6*, retailing is closely connected with IoT. Many of the expected trends to happen in the retail market are tightly connected in how IoT products and technologies can change the experience of consumers and provide companies powerful information and knowledges about consumer behavior. In 2018, the retail market's revenue, in Portugal, reached 20.495 million euros, more 3,4% when compared with the previous year. In fact, the non-food retail market reached 8.542 million euros, with a grow rate of 4,3%, motivated by the positive development of the Consumer Electronics market. As a matter of fact, the reader finds in *section 2.3.2.1*, positive improvements in the consumer electronics in Portugal. According with publications of Statista, the market reached in 2018 a revenue of 674 million euros and it is expected to grow continuously until 2023. By combining the advancements in technology and retailing, along with lack of prior specific technical background or knowledge of the investor and the team, Techperks founders saw the opening of a specialized business in the technological branch as a meaningful and relevant business opportunity.

However, it was also important to understand if consumers would be ready to accept the concept and predisposed to adopt IoT devices. In terms of digital use, Portugal's digital penetration rate is of 96,5%, summing more than 8 million digital users. In terms of mobile use, the Portuguese are among the largest smartphone's consumer in Europa, interacting more than 65 times a day with it. When analysing its openness to e-commerce, the consumers are now starting to understand and adopt digital shopping advantages, despite its preference for physical stores. The *e-Commerce Report CTT* 2018 showed that 4 out of 5 Portuguese shop online and make at least 15 online purchases per year, showing that e-commerce is becoming a consumer trend in the country, mainly motived by the

access to best process when compared with physical retailer's prices. In 2017, e-Commerce grew by 12.5%, reaching a total value of 4.145 million euros. An important indicative of how consumers behave, is shown buy Statista analysis about Consumer Electronics' consumers. The publication pointed out that more than 50% of the market consumers (from 2,9 million users) are aged between 24 and 44 years, belong in the groups of high and medium income and 67% are males. Aditionally, an important trend of the consumer for the next years is the demand for premium products, which represents an important insight for the IoT sellers, whose products are typically not low-cost. *In section 2.3.2.4.*, the reader meets an illustration about the typical IoT consumer: women or female, aged between 18 and 54 years old, belong in the high-income group, is excited about technology, and looks for usefulness, reliability and security when purchasing a product. By that, it is possible to conclude that the consumers' overview positively sustained the business opportunity beyond Techperks.

When evaluating the Portuguese Consumer Electronics' market (used as the closed benchmarking to study the IoT consumer devices), the main players are Worten, Fnac, Media Markt and Radio Popular. As seen on Figure 10, their assortment is wide, their strategy is focused of e-commerce, and there is still too much price promotion activity happening. Thereby, even assuming PCDiga or Amazon as important market players, one can not highlight the one specialized only to high-tech IoT consumer products, where consumers could have access to the state of the art of smart devices and also receive a high level of service and post-sales assistance: the differentiating market opportunity to Techperks.

To conclude, the reasoning behind Techperks business idea is based in 6 important factors: global economy digitalization, the expected exponential growth and development of the Internet-of-Things market, the positive demand from consumers for innovative and smart products and higher willingness to pay for premium segment, expansion of the Consumer Electronics' market in Portugal, the identification of a market gap of consumer IoT-specialized retailers in the Portuguese market and the low initial investment.

**2)** *"What are the threats, opportunities and success factors of the market found by Techperks? After analyzing Techperks' strategy and Financial results, which are its strengths and weaknesses? Please analyze those by using a SWOT Analysis and adrees them with a Dynamic SWOT Analysis.*

Strategic planning is a way to help an organization to be more productive by helping guide the allocation of resources in order to achieve goals. An important part of the strategic management process is the internal and external analysis, which helps companies defining its competitive position and to evaluate internal capabilities. The SWOT Analysis is a process that involves four areas into two dimensions. It has four components: strengths, weaknesses, opportunities and threats. Strengths and weaknesses are internal factors and attributes of the organization, opportunities and threats are external factors and attributes of the environment.

To understand opportunities and threats is important to analyse the environment. In the *sections 2.3.1, 2.3.2.* and *2.3.3* from the case are given different informations regarding the market situation, the consumer behavior and the competition landscape. These help us find market opportunities and threats. Opportunities include market growth or increasing consumer demand for smart products. On the threats side, consumer barriers to smart product adoption or strong competitor power can be seen as risks affecting the brand sustainability. In section *2.3.1.5* we find different critical success factors pointed out by different authors. Most relevant to Techperks' case are the global dimension of the IoT market, the scalability and connectivity between devices, the collaboration between companies and suppliers, the alignment of business strategy with IoT strategy, the attraction of talent and the power of data analytics and information inherent to the use of the Internet of Things.

Weaknesses and strengths are found within the organization, by proceeding to an internal analysis. As suggested, strengths and weaknesses can be found by analyzing the strategy and the financial results of the company. In terms of strategy (*Section 2.3.4* of the case) Techperks' unique value proposition is to bring to the Portuguese market acess to smart IoT devices, which normally can only be purchased online and do not offer the customer assistance or a post-sales support. At the time of opening Techperks, there were no retailers in Portugal specialized in selling innovative IoT products to consumers.

Techperks founding team thus found its market gap and decided to create the brand. By analyzing the Portuguese consumer behavior, they realize that the Portuguese are open to new technologies and are increasingly betting on premium products and moving away from the *lowcost* concept. In addition, the Portuguese show a tendency above the European average to make their purchases on large commercial surfaces. Thus, as the brand was young and it was important to get the notoriety among consumers, the chosen place was the largest shopping center in Lisbon. However, due to the high costs of operating a store there, they decided to make the store a small pop-store in one of the busiest squares in the commercial center, as more and more brands are betting on this type of concept.

At the service level, the brand seeks to provide a dedicated service that specializes in the products and enables consumers to trust the brand. After-service is also a differentiating foundation of the brand. The customer can count on a two-year warranty on all products and an immediate replacement warranty, without having to wait for repair time as on all competitors, a benefit achieved through the strategy of establishing exclusive partnerships with IoT external suppliers. In July 2018, the brand launched its online store. However, it has a lack of digital relevance (due to the absence of digital marketing activities) and customers visiting the physical store are not aware about Techperks e-commerce, as there is no a strategy that connects the two touchpoints and encourages customers to visit it online. In terms of analyzing financial results, it is important to summarize sales variations within the six months under analysis:

| Month | Net value (excluding VAT) | Sales Growth |
|---|---|---|
| *April* | 2694€ | |
| *May* | 3784€ | +40,26% |
| *June* | 3768€ | -0,42% |
| *July* | 5546€ | +47,19% |
| *August* | 5292€ | -4,58% |
| *September* | 4326€ | -18% |
| *October* | 7544€ | +74,39% |
| ***Total*** | **32954€** | |

Table 11 – Techperks' revenue

By analyzing the variation of sales over the months, one can notice the great variability over the months, which present very positive growth rates as well as negative rates. However, we find in Table 10 in *Section 2.3.4.4* that the costs of operating the store are around € 10,000 a month, which shows that the store has not yet been able to earn enough in any of the months to cover the costs. It represents a great weakness. When looking at the bestselling products, it is possible realize that one of the bestsellings is also one of the most expensive and innovative, belonging to the smart home class, more specifically entertainment. Thus, it is possible to derive that the customer is keen on choosing differentiating products and not sold by other retailers, despite the high price. So maybe this is an indication that the brand should bet on this class of products.

To summarize the analysis, here is presented the SWOT Analysis for Techperks:

STRENGHTS

- ***S1***: Investor's experience in sales and in technological markets;
- ***S2****:* Exclusive physical distribution of several brands in Portugal;
- ***S3****:* Strong relationships with suppliers;
- ***S4****:* Convenient location of the pop-store;
- ***S5*****:** Modern and suitable image;
- ***S6*****:** Good level of service;
- ***S7****:* Post-sales support: customer doesn't need no wait for reparations – lower purchase's perceived risk;
- ***S8****:* Qualified sales team;
- ***S9*****:** Online store is already running;

WEAKNESSES

- ***W1***: Too depending on a restricted range of suppliers;
- ***W2***: Limited space in physical store, which limits the interaction with the customer;
- ***W3:*** Pop-stores are normally concepts which don't last long and are very successful due to its surprise effect (such as a pop-up window). Techperks pop store became a long-lasting popup, which is no longer profits from the surprise affect;
- ***W4***: Low rotation of assortment;
- ***W5:*** High-operating cost;
- ***W6:*** Average financial performance – sales are slowly developing, maintaining a low growing rate;
- ***W7***: Sales do not overcome costs, which is a very dangerous for long-term business sustainability urgency to increase sales;
- ***W8:*** Low conversion rate from traffic to purchasing customers;
- ***W9:*** Almost inexistent Marketing efforts: only price promotion, flyers distribution and social media;
- ***W10***: Weak social media pages – 220 Likes in Facebook and around 80 Followers – very low engagement rate and interaction with customers;
- ***W11:*** Physical and online store are not connected;
- ***W12:*** Lack of CRM system and strategy;
- ***W13:*** Notoriety problem;
- ***W14:*** Low Online sales.

OPPORTUNITIES

- ***O1***: Market growth – Consumer IoT market to grow at a grow rate of 23% until 2023;
- ***O2***: Growing number of Consumer IoT market users;
- ***O3:*** Positive trends pointing to massive digitalization;
- ***O4:*** Proliferation of Consumer IoT products;
- ***O5:*** Demand for premium products;
- ***O6***: Tendency to lower price sensibility;
- ***O7:*** Online shop as a diversification opportunity, with lower operating costs;
- ***O8***: Portuguese consumers considered early adopters for technology;
- ***O9***: Consumers are trading purchases for meaningful purchasing experiences;
- ***O10:*** Large percentage of customers has already acquired or wants to acquire within 2 in the short term a smart device;
- ***O11***: Advancements E-commerce, with continuously growing revenue;
- ***O12***: No substitute products;

THREATS

- ***T1***: Strong retailers as indirect competition;
- ***T2***: Privacy and Security concerns for consumers;
- ***T3***: Increasing barriers against IoT devices adoption;
- ***T4:*** Possible economic recession in Europe in upcoming years;
- ***T5:*** Fragile international trade relationships;
- ***T6:*** Competitors have larger commercial spaces and wider product assortment;
- ***T7:*** Statistical startup failure;
- ***T8***: Online marketplace belong competitors which sales a wide assortment of products;
- ***T9:*** Technology becoming a commodity – demand for up-to-date versions and products – risk of obsolete stock;
- ***T10:*** The supply chain is too dependent from China, the biggest producer;

### *Dynamic SWOT Analysis*

| | STRENGHTS | WEAKNESSES |
|---|---|---|
| OPPORTUNITIES | • O2 + S3: Expand assortment and develop exclusive relationships with new suppliers;<br>• O5 +O6+ S6: Invest in finding innovative products, with higher price levels;<br>• O10 + S2: Expand product categories, namely investing more in wearables and smart home devices;<br>• O11+ S9: Develop an E-commerce strategy and create incentives to convince customers to visit the online store. | • W2 + O9: Create in-store experiences by demonstrating the products in creative ways;<br>• W6 + O10: Build traffic into Techperks online store, through incentives to consumers, coupons or buy establishing digital marketing campaign;<br>• W11 + O11: Develop a connection between physical and online store, based an omnichannel strategy. |
| THREATS | • T1 + S3: Leverage on differentiating products, find niche products, not available in Portugal and well rated in other countries;<br>• T3 + S9: Focus on investing in marketing efforts, working with tech influencers;<br>• T8 + S6: Invest in service quality, develop high service points;<br>• T5 + S2: Establishing partnerships nationally or within EU to diminish the risk;<br>• T1 + S9: Work with marketplaces to increase online presence. | • T1 + W12: Design a CRM process, whereby customers preferences and purchase history can be saved and use to personalize the experience;<br>• T6 + W2: Evaluate the possibility to open a larger store or find a cheaper strategic location;<br>• T7 + W9: Develop a digital marketing strategy to help develop the online the sales and interaction with customers in Social Media;<br>• T9 + W4: Create limited edition weeks, stimulating the surprise feeling to attract customers. |

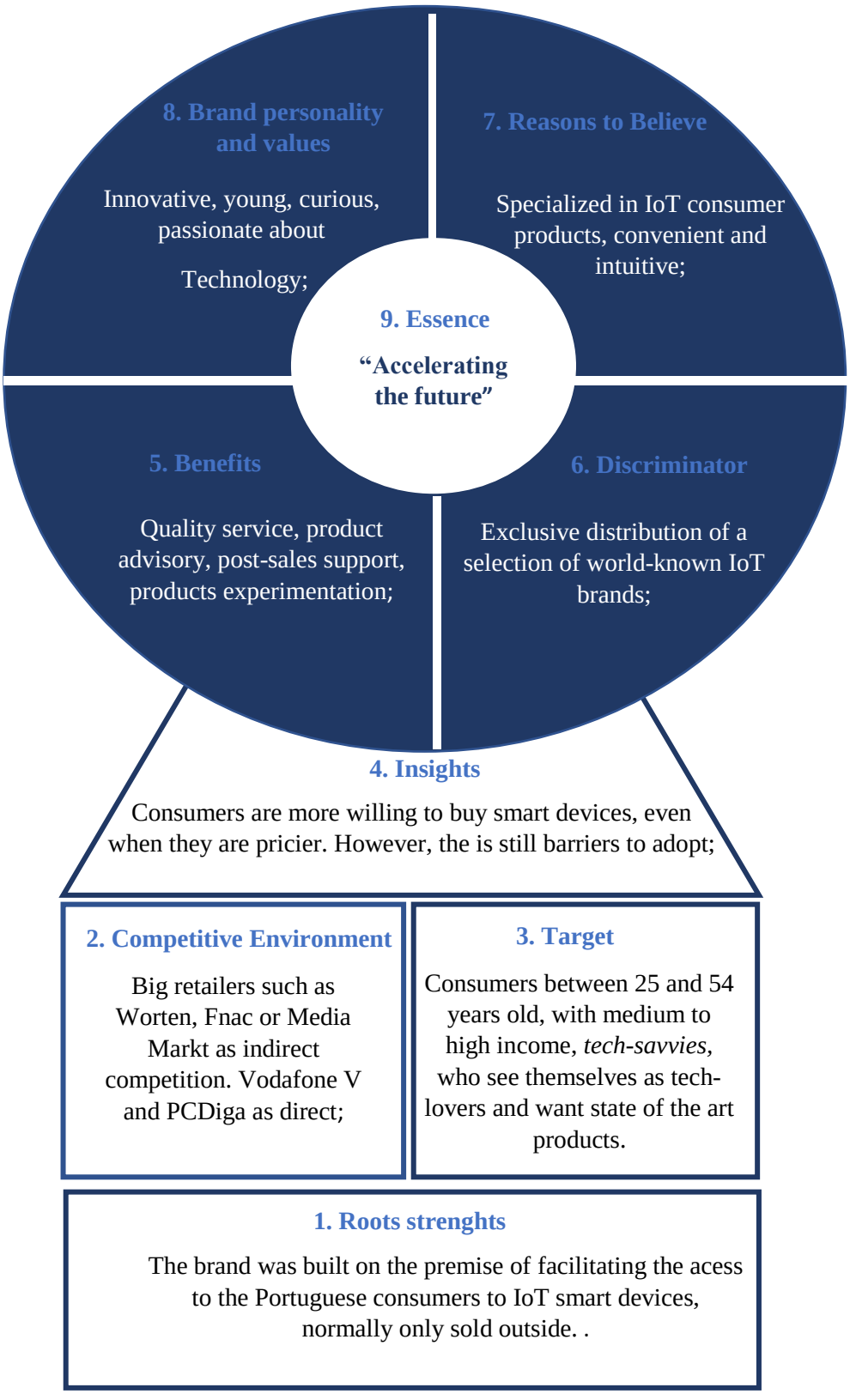
**3)** "*Techperks was a brand created to bring the most innovative IoT consumer products to the Portuguese market. Please analyse the strategy adopted to develop the brand (by using a brand model) and evaluate its implementation by analyzing the marketing-mix. "*

Techperks brand was created in 2017 to "bring the future" to Portuguese consumers. The brand's strategy was focused on finding a gap in the market and specializing in a fast-growing niche: looking for smart gadgets from different categories. The brand is positioned as an "accelerator of the future" for the Portuguese market and seeks to serve those who want to purchase technology products that are often difficult to find in Portugal with a high level of service and after sales assistance. Prior to Techperks, consumers often had to import the product directly outside the European Union, subject to customs costs, at the risk of not receiving the product or if receiving, not being protected in case of anomaly or reparation. Thus, Techperks vision is to become a synonym in the consumers mind for IoT products and a national technology reference, where customers will only find the state of the art regarding technology around the world. The brand does not want to compete directly with Worten or Media Markt and to be a giant of the consumer electronics, but instead, serve a niche of consumers who do not want to buy a washing machine or a fridge, but instead, a self-driven luggage or an intelligent sunglasses which adopt automatically lenses color to the external light and can be controlled from a smartphone or a smartwatch.

As presented in *Section 2.3.4.2*, brand positioning can be summarized in the Key brand model. The model elected to present the positioning of Techperks was the key brand model, which includes information about 9 different brand dimensions:

- Root Strengths;
- Competitive Environment;
- Insights;
- Benefits;
- Discriminator;
- Reasons to believe;
- Brand personality and Values;
- Essence.

***Key Brand Model***



### *Marketing-Mix*

| | |
|---|---|
| ***PRODUCT*** | • Narrow and shallow assortment;<br>• Limited selection of exclusive brands;<br>• Constant entries of new products;<br>• Products are normally in the beginning of its life-cycle;<br>• The products sold are normally selected according to its convenience, quality, design and expected value for consumer. |
| ***PRICE*** | • The price strategy used by Techperks is a skimming strategy. In the analysis included in *Section 2.3.4.4.*, it is possible to see that prices are higher than buying online but the customer receives extra service, guarantee and after sales support, ranging from 16€ to 999€.<br>• The prices from the physical and online store are the same; |
| ***PLACE*** | • The physical store is a Pop-up store in Colombo;<br>• The store environment is not exclusive from the brand, is always opened to the external part, which do not facilitates the use of lightening, music or color to create the store environment;<br>• The physical appearance of the store is modern, clean and futuristic;<br>• The online store was designed to simulate the environment felt physically in the pop-up store. |
| ***PROMOTION*** | • Promotion is one of the weakest aspects of marketing operationalization of Techperks;<br>• At the store customer can bring flyers with information about the product and the brand;<br>• The brand its present in Facebook, Instagram and LinkedIn, but with very low interactivity or engagement with customers;<br>• Inexistence of a digital marketing strategy;<br>• Every month, there is a theme and price promotions associated with the team; |

Table 12 – Marketing-Mix

The Marketing-Mix approach refers to the operational marketing activities to implement the previously defined strategy into 4 key categories. These are Product, Place, Promotion and Price. In *Section 2.3.4.3*. of the case, the statement presents the brand actions for each category. The table presented above is a summary table for the activities and their corresponding categories.

Finally, we can rate the implementation of the brand strategy below expectations. Although the brand was established in differentiating pillars that aim to respond to a market failure, part of that differentiation was lost in implementation, as it was not implemented following a philosophy of innovation and disruption. When we look at the elements of Marketing-Mix, the weaknesses overcome brand strengths, which can seriously undermine the sustainability of the company's business. As such, before focusing on a new positioning to revitalize the brand and improve sales performance, it would be more useful for the brand to improve the composition of its marketing mix, especially at the promotion and place level, starting with the dynamization of a new communication strategy, perhaps younger and more appealing to the target and more focused on online (very attractive environment for the target customer) and also through the improvement of sales channels and customer experience, namely in an attempt to carry a high level of service provided to the physical store to the online store.

4) *"By analyzing the customer journey presented, please identify critical points which can affect Techperks' performance and suggest concrete strategies to overcome those critical points."*

### *Consumer journey mapping*

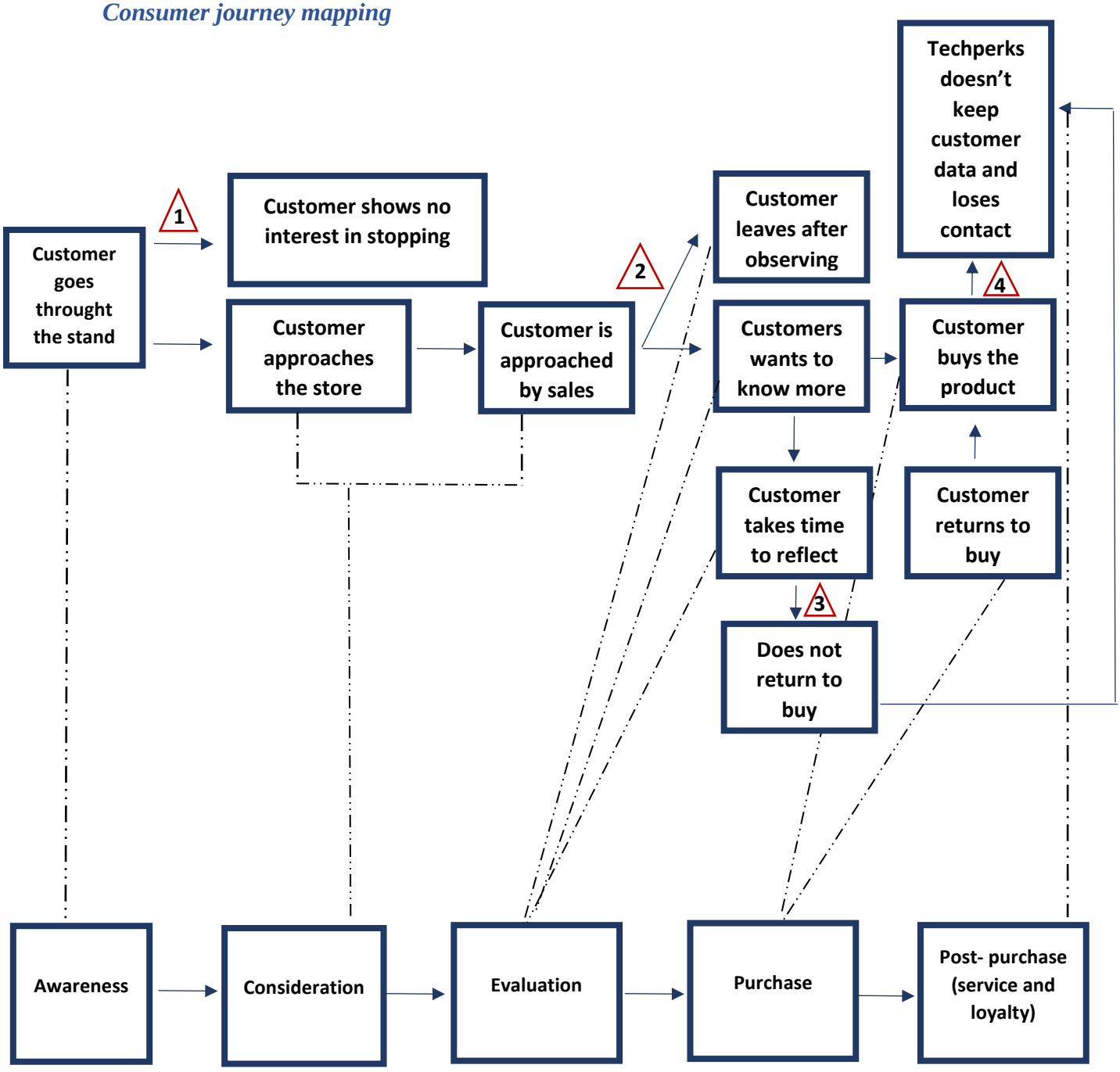



*Figure 42 – Consumer Journey combined - mapping*

A customer journey is a process of five steps – awareness, consideration, evaluation, purchase and post purchase, which maps the consumer behavior towards the purchase or adoption of a product or services since the moment she or he is aware of it until the post-purchase moment. In the case study, the consumer journey mapped is not design according to these five moments, but commonalties can be found between the two models. The first moment (as seen of figure 40) – "the customer goes through the stand" can be correlated with the moment of awareness, in which the customer realizes the *stimulus* and becomes aware of the Techperks' popup store. Awareness is not only limited to the physical moment of seeing the store, can also be awaked with publicity, recommendation or active search. The second moment – "the costumer approaches the store" and "customer is approached by sales staff" can be seen as the moment of consideration. Evaluation happens when "consumer wants to know more", "consumer takes time to think" and "consumer abandons the store" when the evaluation is negative. In this phase the potential customer observes the product, perceives interest and ask questions about it in order to evaluate purchasing's decision. The phase of purchasing is compared with "Consumer returns to buy the product" and "consumer buys the product".

Although not being possible to obtain conversion rates between the phases, one can conclude that there is no high conversion rates phase to phase. Thereby, it is important for Techperks to understand consumer journey mapping and to identify critical points which can be arming the final purchasing rate and justify lower sales levels. In the figure 42, it is possible to find the critical moments with a triangle symbol with a number. Each number corresponds to a critical point, which are identified in the following list. For each critical point, one can find a suggestion or recommendation of resolution/improvement:


**"*consumer goes through the store*" – "*consumer has no interest in stopping*":**

This is the first critical point found by Techperks, in which it loses the biggest percentage of conversion. Consumers see the popup store but do not feel compelled to approach it. Many reasons explain the lack of interest, such as: no interest for technological products, absence of brand notoriety, misunderstood about the brand concept (customer may not identify it as a technology retailer), store does not "stands from the crowd" (consumers

in shopping centers are bombarded with information, and Techperks may not stand out from the other stores), consumers already now the concept and it is no longer interesting and surprising. Many consumers do not approach Techperks because there are not aware of about what it stands for. When compared with other popup stores, normally associated a pre-existent brand, the consumer is attracted due to brand's notoriety. However, in the case of Techperks, the first contact between the brand and the consumers happens when the consumer goes through the stand in the shopping center and not previously through publicity, recommendation or information search.

*Recommendation/suggestion*: Develop communication efforts to leverage the notoriety of the brand. Social media pages of the brand are very rudimental and do not stimulate engagement with customers. An important step would be to increase the frequency of publication in social media pages and the development of different activities to incentivize interaction. As the organic growth is difficult to obtain in a short period of time, paid publicity in Instagram or Facebook are effective strategies to increase traffic and interaction and represent lower cost when compared with traditional media. Aditionally, social media pages are powerful stages to collect customer feedback, namely recommendations and suggestions. In order to attract customers to rate the brand in social media pages, it is important to provide consumers with extra incentives or benefits, such as discounts, coupons, access to contests, events and special offers. It would be very impactful for Techperks business that costumers approached the store having previous information about the concept, by being already aware of it. Aditionally, after 6 months of operation, it would be important to proceed to visual changes of the physical environment of the store, which would recall more attention and attract more traffic.

### 2 "*costumer is approached by sales staff*" – "*Costumer leaves after observing products*":

In this point of the process, the costumer decided to visit the store and to know more about its products. If after analyzing the products and establishing contact the customer leaves, it may signify the mismatch between customer's expectations and the store experience. The causes may be related with not having interest in the assortment characteristics (type

of product, quality, novelty), not receiving the expected service from the sales staff or not enjoying the price of the products.

*Recommendation/suggestion*: If the costumer approached the store, one can expect that there is interest and consideration about purchasing. An important suggestion would be to collect feedback (by using feedback trackers, such as tablets), to increase the assortment rotation or creating thematic weeks (developing costumers' interest and enjoyment with the "surprise products" and to analyse if the quality of the delivered service matches the designed quality if the service (by using mistery customers or analyzing the sales team in action).


***"Customer takes times to reflect" –" Customer does not returns to buy the product"***

Very often customers decide to postpone the moment of purchase. This critical point takes place in the phase of "evaluation" where the customer evaluates advantages and disadvantages about purchasing, takes into consideration alternatives places to purchase and weights options. In this phase it is very important to the brand to be evaluated as the best option. When the consumer does not come back to buy the product either found a best product or place to buy it (with a best price or higher perceived value) or abandons the buying process.

*Recommendation/suggestion*: To overcome this critical point, it is very important to Techperks to be the best alternative. Therefore, it is important to know (in real time) the competitor's offers and alternative products and fast react, to provide the best customer experience and to create a relationship with the customer. Aditionally, it is also important not to lose the contact with the customer. By offering benefits and incentives to purchase, the customer is more willing to provide the brand with personal data (such as email or mobile numbers). After having the customer's informations, the brand can ethically treat the information and use it to maintain contact with the costumer.


***"Customer buys the product" – "Techperks does not keep customer data and loses contact with the customer":***

This critical point is one of the most dangerous affecting brand's sustainability. A satisfied consumer is one of the most valuable marketing tools of a brand. A satisfied consumer spreads positive word-of-mouth, is willing to repurchase, recommends to the brand is willing to continuously spend more. Therefore, by not maintaining contact with the customer after purchase, Techperks loses the opportunity: 1) to collect feedback, 2) to analyse customer satisfaction, 3) to send offers and news to the customer, 4) not being able to contact the customer if there is a problem with a product, 5) to maintain a relationship with customer, 6) to analyse trends, 7) to segment customers and identify different costumer groups, 8) to analyse consumer behavior, 9) give incentives to the consumer to come back. Those factors represent a powerful threat and may also be pointed as a meaningful reason to explain Techperks underperformance.

*Recommendation/suggestion*: An important step towards the maintenance of relationship with purchasing customers is to develop a Customer Relationship Management program or strategies, which allow the brand to collect important information about consumers and to manage relationships with different customer profiles. CRM systems are widely used in the retail industry to track customer purchases, save customer background, and to send personalized messages or offers to customers. CRM softwares or systems are also very used to predict sales, increase customer loyalty and to help maintaining the customer base. By optimizing relationships with customers, retailers will likely be able to proceed to a more effective target identification and consequently increase the revenue per customer By using it, Techperks can better organize internal processes, understand better customer behavior and design successful strategies to maintain the business.

5) *"Please justify the need of the brand to adopt a new online and offline strategy, prioritizing E-commerce development and creating integration between both touchpoints."*

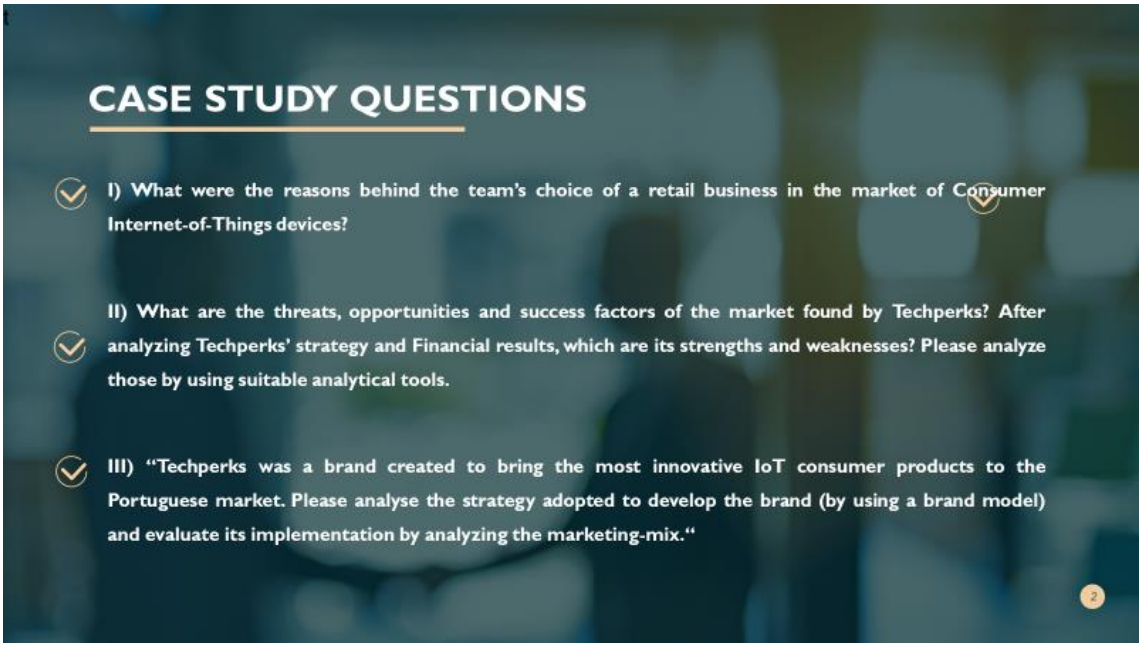
In section 2.3.4.3., of the case, it is possible to find information about Techperks online store. Despite only being launched in August, the customers may now find a wider selection of Techperks exclusive products online, assured by the physical store in case of technical problems with the product. However, despite its launch, online sales are not developing as expected and consumers are not aware of the existence of a new online store. The store was created with the purpose of serving customers from different locations, offer a wider assortment (which is physically undoable due to the limited space available at the stand) and to test the acceptance of different products. Despite its potential, one can not easily find Techperks online presence. A quick online search for "IoT Products Lisbon, "IoT Retailers in Portugal", "buy IoT products online" or "smart home products Lisbon" never mentions the digital presence of Techperks, either the brand website or its social media pages. One can only find Techperks online when directing writing in search engine "Techperks". That is a strong evidence of the invisible presence of the brand online, thereby explaining both low physical sales as also low online sales. It also justifies the need to invest in designing a new marketing strategy – online and offline – allowing consumers to be aware of the brand, influencing them to visit Techperks website or social media pages, and invite them to experience IoT both online and offline. In other words, investing in building an omnichannel experience.

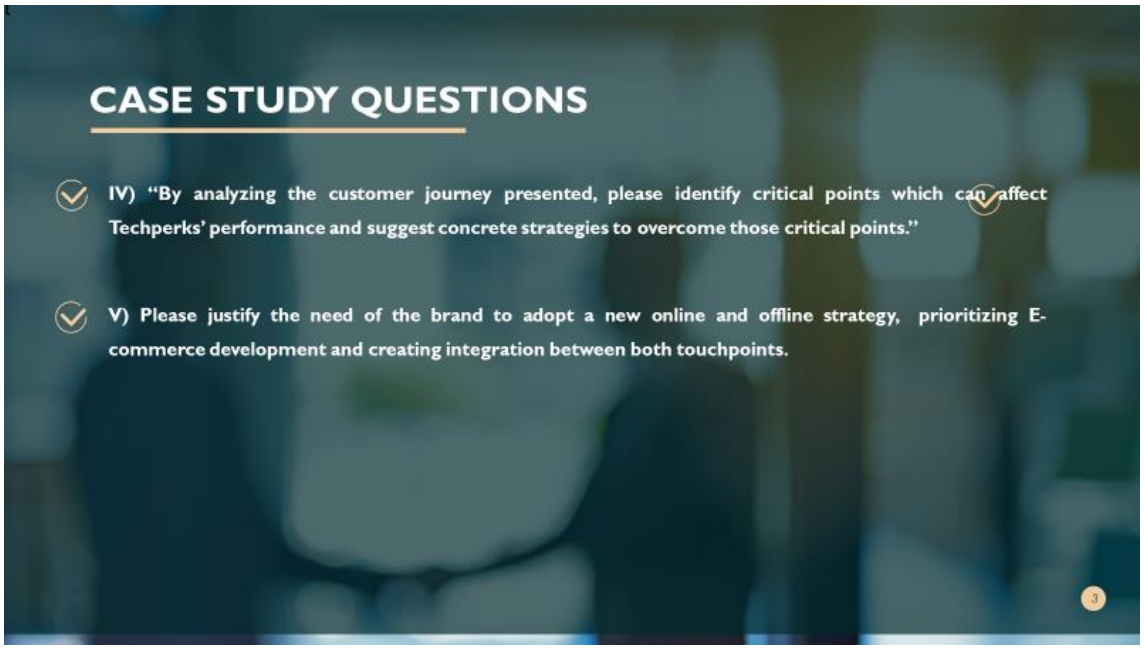
Omnichannel means buying by using multiple available channels, physical or digital, dynamized by the seller. By implementing an omnichannel strategy, the lack of connection between the online and physical store would no longer be a threat to the startup and would improve customer experience. Companies each adopt omnichannel strategies are achieve greater results in revenue and a higher customer retention. Omnichannel is intensely connected with customer-centered experiences, where customers can acess to the same experience about a brand in multiple channels: mobile, laptop, tablet or in-store. The key about such strategy is to replicate the store environment and experience in every

channel, by integrating information and offering the customer the power to choose and to feel satisfied no matter how he or she decides to purchase.

Nonetheless, introducing a Omnichannel strategy in a business requires many resources and capabilities. To place the customer in the center of the process requires centralized information regarding all the retailer's activities, namely, prices, stock levels, promotions, customer databases and a reliable connection between physical and digital touchpoints. For Techperks to introduce such a strategy, the investment would high, and the company would have to rely on experienced partners, such technological and logistical partners. Aditionally, the experience would have to be improved. Techperks is a retailer, specialized in consumer IoT products, who does not uses IoT products in its in-store experience. An important step towards the adoption of the "omnichannel generation" would be introducing in the physical store experiences with IoT products which could attract traffic to the store and "entertain" the customer and help them to experience the advantages of adopting the products. Aditionally, Techperks would leverage on connecting its social media page with the online and offline touchpoints. From social media posts, users could directly place orders from the website, see the stock levels in the physical store and speak directly with sales staff in online chatbots. Those are only a few from many strategies and interesting ideas which could change and revolutionize Techperks' future, prioritizing E-commerce but continuing to serve the customer physically at the same time. Thereby, truly empowering the customer to freely to decide how to make the best from brand experiences.

## 4.8. Resolution Presentation




## Case Study Summary

- Technology is changing the way we live, work and interact: a new technological revolution has already started;
- Artificial Intelligence, Internet-of-Things or Maschine Learning are new realities, affecting all economy's sectors.
- Although considerer complex and entangled, these new technologies generate new industries and businesses models, which allow following devepment and industry's growth;
- When one thinks that all business technology-related are sucessful, it is important to mention the variety of new discoveries happening at the same time, which rapidly turn an innovative product into an obsolete product;

4

## Case Study Summary

- Thereby, it is important to support the new business with a strong, reflected and differantiatting strategy, which will drive sucess;
- Monotoring is equally important. When projects do not run as predicted, it is important to reajust again, and find critical points;
- Many startups have arrived with the tecnological revoltion: many fail to reach the second here in healthy development;
- Techperks is one of those, which wanted to bring IoT into peoples' lives, but whuch failed to deliver the differentiating unique value proposition (UVP). The gosl of the case is to understand what is behind the almost failure and propese redjustment strategies.

5

## Question I


8

## Question II

SWOT Analysis →

**STRENGHTS**

- Investor's experience in sales and in technological markets;
- Exclusive physical distribution of several brands in Portugal;
- Strong relationships with suppliers;
- Convenient location of the pop-store;
- Modern and suitable image;
- Good level of service;
- Post-sales supports service
- Qualified sales team;
- Online store is already running;

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## Question II

SWOT Analysis →

**WEAKNESSES**

- Too depending on a restricted range of suppliers;
- Limited space in physical store, which limits the interaction with the customer;
- Pop-stores as a temporary concept;
- Low rotation of assortment;
- High-operating cost;
- Average financial performance – sales are slowly developing, maintaining a low growing rate;

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## Question II

SWOT Analysis →

**WEAKNESSES**

- Sales do not overcome costs, which is a very dangerous for long-term business sustainability urgency to increase sales;
- Low conversion rate from traffic to purchasing customers;
- Almost inexistent Marketing efforts;
- Weak social media pages;
- Physical and online store are not interconnected;
- Lack of CRM system and strategy;
- Low brand recognition;
- Unknown online store;

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## Question II

SWOT Analysis →

**THREATS**

- Strong retailers as indirect competition;
- Privacy and Security concerns for consumers;
- Increasing barriers against IoT devices adoption;
- Possible economic recession in Europe in upcoming years;
- Fragile international trade relationships;
- Statistical startup failure;
- Barriers in technology adoption;
- Technology becoming a commodity
- The supply chain is to dependent from China, the biggest producer;

15

## Question II

SWOT Analysis →

**OPPORTUNITIES**

- Market growth – Consumer IoT market to grow at a grow rate of 23% until 2023;
- Growing number of Consumer IoT market users;
- Positive trends pointing to massive digitalization;
- Proliferation of Consumer IoT products;
- Demand for premium products;
- Tendency to lower price sensibility;
- Online shop as a diversification opportunity, with lower operating costs;

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## Question II

SWOT Analysis →

**THREATS**

- Strong retailers as indirect competition;
- Privacy and Security concerns for consumers;
- Increasing barriers against IoT devices adoption;
- Possible economic recession in Europe in upcoming years;
- Fragile international trade relationships;
- Statistical startup failure;
- Barriers in technology adoption;
- Technology becoming a commodity
- The supply chain is to dependent from China, the biggest producer;

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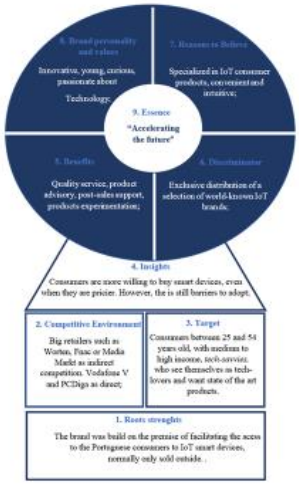
## Question III

Key Brand Model →

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## Question III

Marketing-Mix →

| | |
|---|---|
| ***PRODUCT*** | • Narrow and shallow assortment;<br>• Limited selection of exclusive brands;<br>• Constant entries of new products;<br>• Products are normally in the beginning od its life-cycle;<br>• The products sold are normally selected according to its convenience. quality, design and expected value for consumer. |
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19

## Question III

Marketing-Mix →

| | |
|---|---|
| ***PLACE*** | • The physical store is a Pop-up store in Colombo;<br>• The store environment is not exclusive from the brand, is always opened to the external part, which do not facilitates the use of lightening, music or color to create the store environment;<br>• The physical appearance of the store is modern, clean and futuristic;<br>• The online store was designed to simulate the environment felt physically in the pop-up store. |
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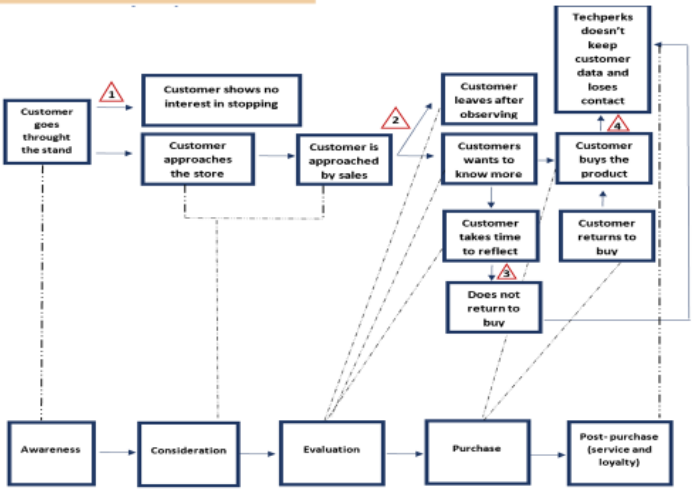
20

## Question IV

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## Question IV

**CRITICAL POINTS**

- 1 - "consumer goes through the store" → "consumer has no interest in stopping" ;
- 2 - "costumer is approached by sales staff" → "Costumer leaves after observing products";
- 3 - "Customer takes times to reflect" → " Customer does not returns to buy the product";
- 4 - "Customer buys the product" → "Techperks does not keep customer data and loses contact with the customer":

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## Question V

- Online store and physical store are not connected!
- Customer can not buy online and switch in store;
- Customer can not order from the online store in the pysical store;
- Sales teams do not have acess to online sales;
- Inexistent digital marketing strategy;
- Poor online sales performance.

» Need for a new strategy!

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## Question V

Omnichannel strategy

- Online store and physical store database sharing;
- Customers can acess their purchase background online and offline;
- Sales staff are ready to inform about every situation related with both stores;
- Implementation of a CRM program, which will help predict sales, better understand consumer behavior and extend relationships with customers;
- Establishment of partnership with technological and logistics firms which will help managing delivers and the syncronyzation of all information;
- Investment in paid publicitiy in social media and webpages;

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## 5. Managerial Implications

The Internet of Things (IoT) includes the interconnection of physical objects, equipped with sensors, components and networks which gather information, analyze it and have the ability to share it with each other. Within this classification are various ranges of applications, products, services and networks that encompass the complex and diverse world of the Internet of Things. IoT has come to change the world in many ways. From the smart industry, by the trend Industry 4.0, which aims to optimize resources and process intelligence to smart cities, based on mobility, sustainability and the use of information to improve life in society.

Its applications range from the most complex components to the most ordinary objects we found at home that come to life with Internet-of-Things. A smart fridge, a watch that measures health or even self-driving luggage. This is one of the big technological trends that has been changing the way we live that still has a lot to show. This technological generation has grown rapidly through the exponential growth in the number of connected objects in the world and also through the way big players have used it to grow and create new markets. The major incentive for the development of new IoT-related businesses is undoubtedly the potential financial returns that massification allows to achieve (The Economist Intelligence Unit, 2013). It is therefore not surprising that the proliferation of business models stemming from the explosion of this new technological stream.

Thus, one can say that the economic development of IoT is clearly ensured by the constant new opportunities it creates, both in industry and retail, because, in fact, IoT affects all sectors of the World Economy. Thus, this case portrays one of the business models that contribute to the IoT expansion cycle. Although small in scale, the business case presented was grounded and generated on the basis of business opportunities designed by the Internet of Things. These opportunities are also reflected in the increasingly notorious desire of consumers to be part of this paradigm shift. Techperks, by combining an exponentially growing market and a growing hunger for consumers who want to be part of the change, has created a business to bring the two realities together in an attempt to make a concept complex into experiences that are simple and convenient for the consumer. However, not all IoT-based businesses follow the same multiplication trend as the same. The relevance of the case, in addition to showing a real example of the

tangibility of an opportunity, contributes to the harsh reality of many business models, which take time to pay off and reign in the marketplace, despite all the positive circumstances surrounding it. Thus, this case contains pertinent insights, which show how from a complex world one can also choose apparently simpler path. It's also interesting because it addresses an interesting effect among consumers: the desire and fear of being part of a more connected and intelligent world. Consumers are in this moment of transition, though still stuck between the choice between technological advancement and personal freedom. Adoption of IoT among final consumers, although positive, has remained well below initial forecasts. The battle for cyber security and privacy is the "big demon" of the technology world, which can become the industry's only snag if companies and organizations can't turn the tide of information control.

Techperks' case study can be of extreme interest to anyone interested in understanding the phenomena of digital transformation through the Internet of Things, whether they are students, managers or just interested consumers. For entrepreneurs, it is even more valuable as it demonstrates the reality of many businesses that have everything to work and sometimes do not demonstrate the intended results. What to do when the desire to undertake fails? This case intends to reflect that when analyzing problems and redefining new strategies, there are always new ways to continue.

***"Because where there is a will, there is always a way."***

***(****Jim Crooks)*

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