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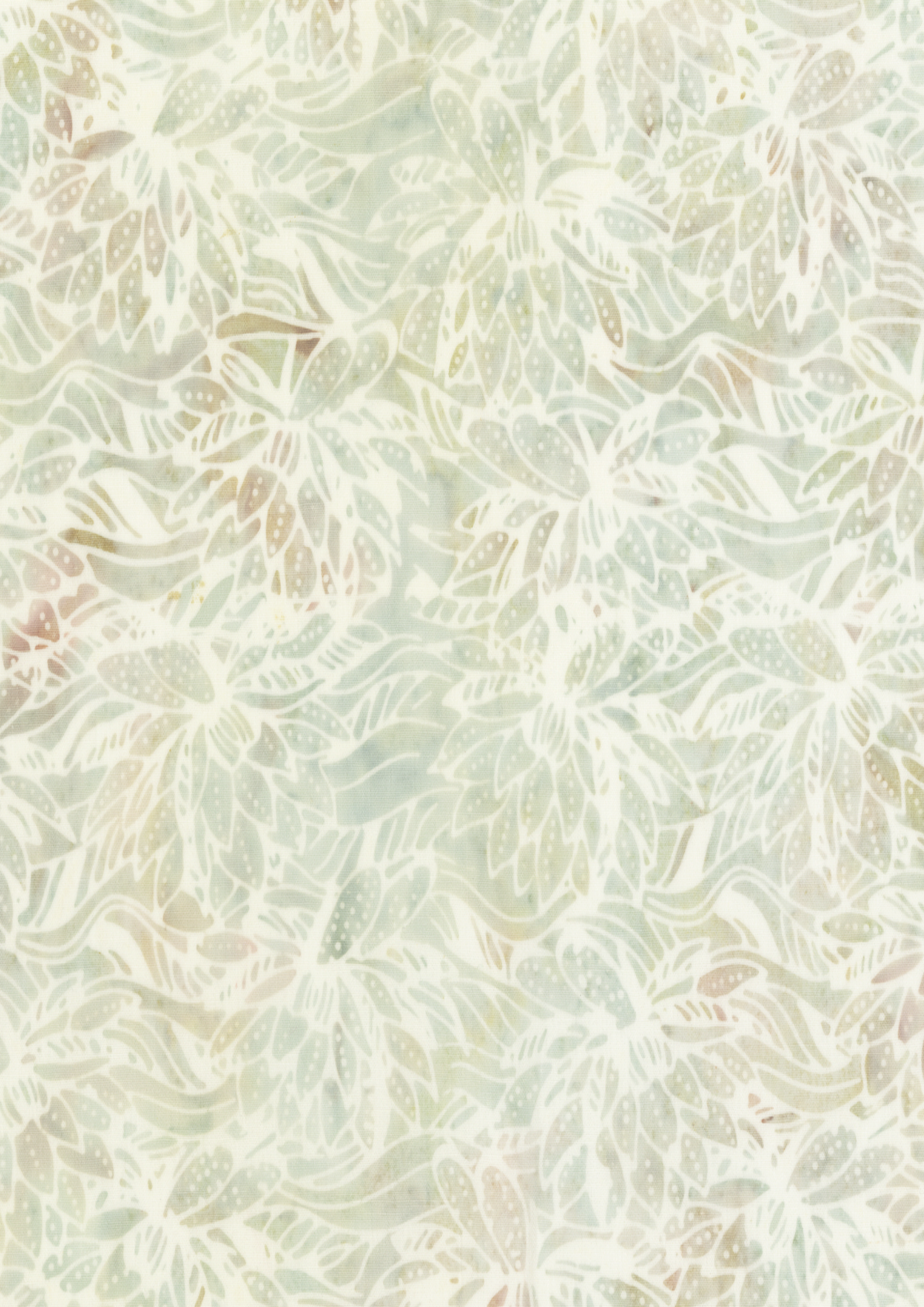
TECHNOLOGY EPIPHANIES IN RETAIL

Thesis by
Valeria Itu
906804

Supervisor: Emilio Bellini
Tutor: Federico Artusi



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II. Abstract

Current changes happening in the retail sector and increasing penetration of online shopping are impacting market dynamics that have been relevant for many years. Specifically, physical retail is facing challenges from digital natives and is offering new ways of customer engagement to outstand the growing competition. In fact, new store concepts are introduced by various companies, proposing new reasons to visit their physical locations. Innovation of meaning (IoM) theory and related literature address the issue and present a process of the new “why” generation. However, limited number of studies have been carried out that research IoM in retail service environment, instead focusing on new product development. Therefore, secondary resources are investigated as well as 25 specific cases are deeply analyzed. The aim of this work is to contribute to the IoM theory in retail, focusing specifically on technology epiphanies. To do so, a matrix is generated, which positions the case studies across innovation dimensions (technology and meaning), revealing 3 strategies of IoM specific to retailers. In addition to theoretical contributions, practical suggestions in a form a framework are created to provide guidelines to firms who consider implementing technology epiphany.

I recenti cambiamenti nel settore retail e la crescente aumento dello shopping online stanno modificando dinamiche di mercato che sono rimaste rilevanti per diversi anni. Nello specifico, il settore del retail “fisico” sta affrontando le sfide portate dalle nuove generazioni, cercando di offrire nuove strade di coinvolgimento della clientela per contrastare la crescente competizione. Infatti sono stati introdotti nuovi concetti di negozio da parte di diverse aziende, le quali propongono ai propri clienti nuovi motivi per visitare i loro negozi. La teoria dell’ Innovazione di Significato pone le basi per affrontare questo problema, presentando un processo di sviluppo di un nuovo basato sul “why”. Tuttavia, ancora pochi studi sono stati realizzati nel campo dell’Innovazione di Significato nel settore dei servizi retail, mentre maggiori ricerche hanno riguardato lo sviluppo dei prodotti. Per questo motivo, in questo elaborato sono state analizzate risorse secondarie e venticinque case study di innovazione nel rietail. Lo scopo del lavoro è di contribuire allo sviluppo dell’Innovazione di significato nel retail, con un focus specifico sulle Epifanie Tecnologiche. Per fare questo è stata generata una matrice, che posiziona i case studies attraverso le dimensioni dell’innovazione (technology e meaning), rivelando tre strategie di IoM specifiche per i retailers. Oltre ai contributi teorici, vengono esposti suggerimenti pratici con l’intento di sviluppare un framework di linee guida per tutte le aziende che intendono implementare le Epifanie Tecnologiche nel settore retail.

III. Executive Summary

INTRODUCTION

Recently many of us have faced a period deprived of physical shopping and some companies even had to close their retail locations. Even though we witnessed a very noticeable change, the dynamics of retail sector have been already evolving over the past decade. Back in 2018 thousands of stores were closed and many businesses will have to erase hundreds more in 2020, from Macy's to Target to Starbucks (Wertz, 2018). From these concerning information one might think that physical shopping is going obsolete, however, it is far from the truth.

In reality, the overall landscape is undergoing radical changes, where modern consumers demonstrate different preferences. Today, firms cannot surprise shoppers with a wide offering, they look for meaningful experiences taking place between customers and companies. In fact, nowadays, those who are struggling are the incumbents, with extensive product catalogues, who overlooked the changing environment while counting solely on the economy of scale. Through the technological advances, modern customers became submerged in the environments where they could easily find all the goods and services they seek. As a result, by the time the incumbents noticed the change, it was even more challenging to adjust.

One of those changes can be considered the shift towards direct-to-consumer model (D2C). Actually D2C unicorns are disrupting retail across various industries, for example, Casper Sleep in mattresses, Warby Parker in eyewear, Everlane in clothing, Glossier in make-up, Away Luggage in travel accessories, and many more. Therefore, retailers cannot treat their physical locations as merely sales channels. On the contrary, they must understand that shops allow them what their online rivals cannot: valuable in-store customer experiences.

Another factor that strongly impacted retail was the widespread Internet coverage which caused consumer expectations to rise. An appearing trend is hyper-connectivity as, surprisingly, an average American person spends more than 9 hours of the day surfing the net, when in the UK people deprive themselves of sleep or underwork in favor of staying online, according to Ofcom Online Nation Report. Interestingly, the time spent online is not the only element of hyper-connectivity. Today, multi-screening and multi-tasking are common phenomena

that secure a continuous stream of contents among different devices and platforms. In fact, Google evidenced that 90% of users who own more than 1 device switch between them to complete tasks, with around 3 combinations of screens each time.

It is worthy to mention that on-demand shopping is becoming the normality. For instance, now shoppers do not overly plan their purchases, instead they shop in so-called “micro-moments”, in unplanned situations while being involved in other activities. Shopping micro-moments take place at all times of the day for various purposes, and it is necessary to reach and capture buyers at those key stages.

Hardly a new concept, but one that is becoming much more commonplace, is sustainable consumption. Shopping happens faster than ever, so customers prefer certain products that enable them to make environmentally positive decisions. They increasingly look for goods with meaning that is in line with their values, and therefore the right offering is a key difference.

So, what is in for retailers? Modern consumers shop anytime anywhere. So, it becomes more crucial than ever for firms to understand customers, exploiting the potential of innovative technologies so that they can determine what, when, where, and how to sell.

In this way, 2 distinct types of retailers can be identified: the first group which is aggressively moving online and the second one which tries to rethink physical points of sale (POS). While there is a wide range of research dedicated to the digitalization of business, much less can be found on the new role of physical retail. Additionally, innovation of meaning (IoM) theory applied to retail suggests a research scope where authors try to understand what is the new “why” that companies inhibit in their POS.

The aim of this research is to add to the existing IoM theory, focusing on retail service area. Through the analysis of innovative retail solutions, in terms of technology and meaning, technology epiphany cases are identified that allow for a deeper understanding of specific strategies that companies follow to reach the epiphanies. This is obtained through literature review and company case analysis. Then the cases are compared to define common patterns which uncover technology epiphany strategies and, consequently, guidelines to develop them are drafted. Those guidelines are

presented in the form of a framework showing a 5-step process to be executed by retailers which adds to practical applications of IoM in retail.

CONCEPTUAL BACKGROUND

Innovation Types In Retail

Due to its growing popularity innovation is hard to define uniformly. Indeed, researchers propose various explanations of the term, depending on their focus. In order to summarize the definitions found, they were grouped in a table present below *(Figure 1.)*

INNOVATION ASPECTS	INNOVATION TYPOLOGY	MENTIONS RELATED TO RETAIL
OBJECT	Product and Process Innovations	Hall and Wengel, 2014; Shankar et al., 2011; Kantar World Panel, 2019; Esbjerg et al., 2016; Davies, 1992
SOURCE	Market push and Technology pull Innovations	Boletsis & Karahasanovic, 2018;
STRENGTH	Incremental and Radical Innovations	OXIRM, 2014; Reynolds and Sundström, 2014
EXPOSURE TO CONSUMER	Ten types of innovation framework	Curley & Salmelin, 2013; Popa, 2014; Keeley et al., 2013; Boletsis & Karahasanovic, 2018; Bahadur & Doczi, 2016
TECHNOLOGY INTENSITY	Technological and non-Technological Innovations	Boletsis & Karahasanovic, 2018; Pantano & Viassone, 2014; Hung et al., 2012; Pantano & Di Pietro, 2012
ORGANIZATIONAL STRUCTURE	Business Model Innovation	Sorescu et al., 2011; Christensen & Tedlow, 2000; Li & Ku, 2017
SPEED OF ADOPTION	Innovation Diffusion (from Innovators to Laggards)	Pantano & Vanucci, 2019; Rogers, 2003

Figure 1. Types of innovation

If we ask the government about innovation, European Commission, in its annual 2015 report on retail competitiveness identified 4 types of innovation: product, process, marketing, and organizational. Even though it presents a complex view of innovation in retail, product innovation is less common than marketing and process ones as it is seen riskier for retailers (Esbjerg et al., 2016; Hall and Wengel, 2014; Shankar et al., 2011). In this way, incremental innovations happen more often than the radical (Oxford Institute of Retail Management (OXIRM) & Saïd Business School, 2014). Contrastingly, other researchers do not believe in these limits and justify that both product and process innovations frequently take place (Davies, 1992). While many works support this typology, some try to cover the whole spectrum of innovation, for instance, Ten

Types of Innovation is considered a powerful framework that aims to deeply analyze innovation in retail and stresses the importance of activities across the value chain, not limited to simply product creation (Popa, 2014; Keeley et al., 2013; Curley & Salmelin, 2013; Bahadur & Doczi, 2016).

Technology And Retail

A common pattern across the typologies mentioned above is that technology is considered a major driver of innovation. There are those, however, who contradict this opinion undermining the adoption of new technologies by retailers (Pantano & Di Pietro, 2012). They claim that large companies, such as Ikea and Carrefour, use innovative technologies mostly to automatize the checkout process (Hung et al., 2012; Pantano & Di Pietro, 2012).

Moreover, retailers represent different industries, so innovation approach depends on the industry. In fact, several researchers employed Rogers Innovation Diffusion Theory (2003) to position various retailers according to the level of innovation adoption, dividing them into Innovators, Early Adopters, Early Majority, Late Majority, and Laggards (Pantano & Vanucci, 2019). Accordingly, 22 sectors were included and the findings showed that fast fashion or sports retailers are the innovation enthusiasts when small retailers, specializing in sweets, souvenirs, and accessories, were identified as laggards. In this way, there is a clear picture of which sectors are succeed or underperform in innovating the retail.

Omni-Channel Retail

Recently such retail giants as American Amazon and eBay; Chinese Alibaba and JD have been strongly investing in omni-channel retail which can become a dominant strategy, revealing new opportunities for researchers to study both online and offline environments across various sectors (Cai & Lo, 2020; Forrester Research, 2014). In short, omni-channel is related to a business model where a combination of channels is used and integrated into a completely seamless customer experience (Verhoef et al., 2015). However, for many shifting to omni-channel can be challenging and not all companies are enthusiastic about the transition (Picot-Coupey et al. 2016).

In addition, born-digital and traditional retailers require different strategies: clicks-to-bricks and bricks-to-clicks (Gulati & Garino, 1999; Kumar et al., 2012; Pauwels & Neslin, 2015). Even though bricks-to-clicks is more common, digital natives launch physical POS, showrooms, or pop-

up stores. Specifically, Amazon, Apple, Dell Computer, Bonobos, and JustFab are regarded as the pioneers of omni-channel transition (Herhausen et al., 2015).

Experiential Retail

As retailers try to adopt omni-channel strategies and to improve customer journey in POS, experiences become the centre of attention. They look for what cannot be repeated online, so emotionally-engaging experiences gain importance (Grewal et al., 2009; Jahn, 2018; Verhoef et al., 2009). That is how the concept of experiential store was born to provide extraordinary services to consumers and as a result enhance brand image and foster customer engagement. This concept can be found in new flagship store locations (Dolbec & Chebat, 2013; Nierobisch et al., 2017), pop-up stores (Klein et al., 2016; Robertson et al., 2018), brand museums (Hollenbeck et al., 2008), and showrooms (Bell et al., 2018).

Additionally, it is important to understand how to form the experiences inside the POS, so a Forbes author Maloney (2018) identified 6 dimensions which should be adapted to the new concept which include: Purchase, Human Touch, Accessibility, Immersion, Personalization, and Meaning.

Innovation of Meaning

As we can see, meaning is a recurring theme when we address experiences in retail and innovation, in general. So, Roberto Verganti (2003) introduced a new concept of innovation of meaning (IoM) or Design-Driven innovation (DDI) which made product meaning the centre of innovation process. It offers a different approach which involves more radical changes and considers both tangible and intangible elements (Verganti, 2008). In its core "product meaning" is defined as specific purpose of a product for the consumer (Baha et al., 2017). Additionally, the process is driven by design as it entails non-linear processes of exploration, reflection, and interaction (.Jahnke & Hansson, 2010). When compared with classical approaches of technology-push innovation and market-pull innovation, IoM proposes a new semantic dimension of meaning which is more context-dependent than technology. So, when new meanings appear on the market they are seen as odd and peculiar as they go against the current meaning. Also IoM is an open system inside-out process where stakeholders take an active part in helping to perceive new lifestyles and then also to introduce the new meanings.

Technology epiphany

When investigating the theory, a special case of IoM can be found which is called technology epiphany and is reached through simultaneous capturing new technology's value and revealing hidden interpretations. The term "epiphany" with the help of Merriam-Webster Dictionary can be defined as *"a manifestation that stands in a superior position; a perception of the essential nature or meaning of something."* In this way, technology epiphany arises when a sudden realization of new meaning resting in technology happens (Verganti, 2009). In detail, prof. Verganti offers two ways how technology epiphanies appear from a combination of technology-push and design-push innovation strategies. Firstly, companies which are able to quickly detect possibilities of radical new meanings can create epiphanies through maintaining openness towards new technologies that the competitors might have overlooked. In contrast, there is the second approach: firms need to search for new meanings hidden in radical, innovative technologies.

METHODOLOGY

In order to reach the aim of the work, the study was distinctively involved 2 approaches, which included secondary research of literature and related data and the analysis of generated case studies. So, the research is largely theoretical, however, the analysis of the 2 flows of data helped to create practical advice in a form of concrete strategies of technology epiphany and related steps of action for companies to follow.

It is noteworthy to mention, that literature review and case study work were carried out in alternating flows. To be more specific, the flow reminds double diamond design process model, with alternating convergence and divergence stages *(Fig. 2)*.

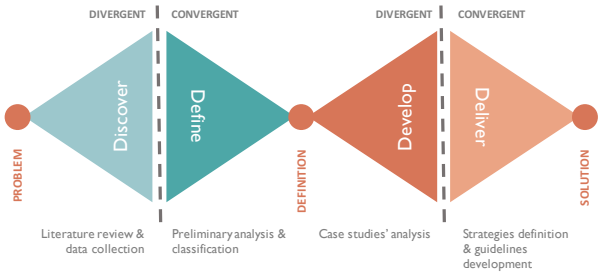

Figure 2. Research process according to double diamond design framework

Following this method, it became possible to uncover similar patterns and major distinctions, as well as the findings, were outlined using clustering, generalization, and strategy theory. In addition, literature review and data collection were inputs not only for the observation of the topic, but also were used in case selection and analysis. In order to form the final sample of cases data from journals, industry ratings,

interviews, company web-sites and reports, social media, recordings of conferences, etc. was retrieved. Apart from secondary research methods, some elements were discovered though conversations with store staff during store visits, when it was physically possible, for example, POS present in Italy and the UK were accessed. When forming cases from the data acquired, the following aspects of each store location were considered:

- Name;
- Number of stores;
- Geographical regions where stores are present;
- Innovation type.

The case format was inspired by Ebeltoft Group which since 2005 has been presenting an annual report on Global Retail Trends & Innovations, focusing on current trends and the most impactful retail cases around the world. In detail, the country of origin is highlighted in their case studies which allows to get insights of local markets. In addition, industry and size identifiers were suggested by an adaptation of Rogers Innovation Diffusion Theory (Pantano & Vanucci, 2019) to get a broader picture of innovativeness. Finally, stores were analyzed from innovation strategy perspective: elements of technological innovation and innovation of meaning, if present, were described.

Representing a large portion of the work, literature review played an important role in information collection and processing, regarding the research question as well as related fields. To be precise, information was derived from scientific literature portals, university sites, and databases, as well as company reports, business journals, and analytics agency reports. In addition, it contributed to the analyses of company cases, their comparison, generation of the final output, and the development of practical business implications.

LIMITATIONS

One of the most impactful constraints was posed by the limited number of company cases analyzed. In total, 25 stores were selected which allowed to reach the aim of the research. On the other hand, the sample was limited because of time and resource constraints and additional examples would have provided higher robustness of the output. Moreover, a higher quantity of cases would have allowed for statistical data analysis. Another limit touches upon the depth of analysis as only a few POS were visited in person while the majority was

investigated using secondary data due to their high geographical dispersion. From another point of view, several limits were in the availability of technology epiphany related literature due to the novelty of the concept.

FINDIGS

Descriptive Statistics

Following the journey of 25 companies in becoming innovative and enriching customer experience unveiled similar patterns and strategies that firms of various industries employ to rediscover their physical retail environments. In general, they either introduce new technologies or new meanings. Interestingly, the distribution of examples is quite even: 7 companies demonstrated innovation of technology, 8 - innovation of meaning, and 9 - technology epiphanies. In addition, the most represented industries are food & drink and fashion, when the least common were sport goods and toys.

And as far as geographical area is concerned, the headquarters of most companies are run from Europe, which means that European businesses, in general, are more creative with physical stores. This may be confirmed by the fact that North American customers more frequently buy online than Europeans who choose to buy in shops (Da Silva, 2020). Nevertheless, when looking at innovative technology examples, almost half of them are by Asian corporations, such as Samsung or Alibaba.

Clusters Profiling

Technology-Push Innovation

The matrix *(Fig.3)* shows the distribution of cases along the two dimensions of innovation: technology and meaning.

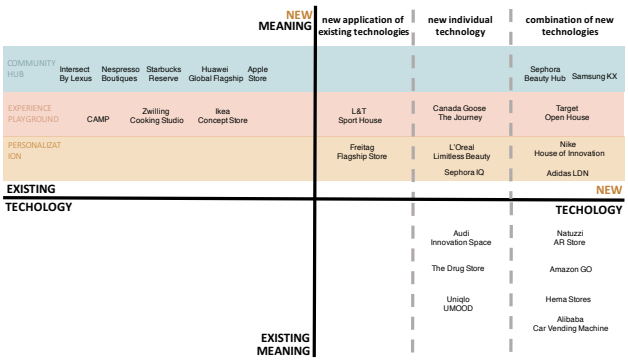

Figure 3. Case clustering across technology and meaning dimensions

For instance, in the bottom right corner Technology Push examples are concentrated, which entail a radical change in technology. Specifically, innovative technologies used in these cases include radio-frequency identification, augmented reality, wearable devices, and face recognition technologies. It is important to mention

that the technologies are new to the company and to the market, however, they do not have to be invented by the firm. Here, innovativeness to the market is considered, where radical technological change takes place and, therefore, can be identified as technology-push innovation. In this way, innovative implementation of the technologies is investigated, when a company may show a new combination of existing technologies, a single new technology or a combination of new technologies.

Design-Driven innovation

After evaluating the examples, they were split into three categories reflecting various new meanings. Evidently, each retailer has a more unique concept behind its DDI, but in order to recognize similar traits, 3 mutual meanings have been obtained: the community hub, the experience playground, and the personalization centre.

Community Hub. The first set of cases is grouped under the idea of a community hub that is becoming more common today. In fact, most businesses studied are committed to this new concept and show common techniques. The central objective of the strategy is to set up a social space inside a shop around a specific theme or brand. For instance, Starbucks around coffee, Apple around new technology, and Lexus around luxury. They seek to draw people in by relying on the simple human desire to be part of a group, by promoting conversation and providing space for debate. Furthermore, the community hubs give space in both ways, material and non - physical, as the size of these stores is very large, starting at about 1,800 square meters and going up to 12,000 square meters. One of the factors behind these big spaces is to allow consumers more liberty, open areas where they can work, rest and relax with their peers (Hattula, 2017). Another significant factor is time, as this kind of shopping spot would allow people to stay indoors for as long as necessary. As one of the most valuable resources, the more time they spend in-store, the deeper their relationship with the company becomes. As a result, broad rooms and even whole design shops exist inside community hubs: dining areas, open-air workstations, conference halls, cafes, and sometimes even art exhibitions.

Experience Playground. When hearing the word “playground” people tend to imagine an area in the middle of a park where kids come to play. In contrast, Cambridge Dictionary states that playground is a place where people enjoy

themselves (Cambridge, 2020). Accordingly, another group of retailers rises which converts their locations into playgrounds for shoppers. In this case, excitement and involvement are essential to the strategy. In order to imagine it better, one can consider it as immersive theater, where customers are the spectators who are assigned a particular path to walk through and members of staff are actors who can act out different scenarios. One of the brightest examples is Target Open House, opened close to San Francisco's Museum of Modern Art as an immersive museum and playground combined. Its slogan says it all: "Come play!" In fact, not only visitors are allowed to test the newest gadgets at their gaming station, but also they get to walk through semi-transparent rooms of an imaginary house each of which tells a unique story. Another feature that defines Immersive Playgrounds is users engagement around a specific theme. For instance, Canada Goose focuses on extreme conditions, Ikea on living in a big city, and Zwilling on cooking.

Personalization Centre. Personalization and co-creation are today's hot topic and are believed to boost customer satisfaction while improving quality of products and services (Prahalad and Ramaswamy 2004; Nysveen and Pedersen 2014). Nowadays, customer co-creation is actively used by start-ups as well as large firms and spreads across many sectors. However, when POS are built around customization it brings the concept to a new level. Now it is possible to design and build a unique Freitag tote, create a personal shade of foundation with Sephora Color IQ or make a pair of sneakers from scratch with NikeID. When it comes to Personalization Centres Nike is definitely one of the protagonists of the strategy. Starting from an online personalization platform to NYC House of Innovation where this experience is made live and supervised by specialists who then construct the sneakers in the on-site workshops. In addition, Nike by You collection, exposed on the last floor, was specifically launched to be tailored and made bespoke. Moreover, Nike Plus members get a chance to design new kicks by scheduling meetings with renowned footwear designers in the Expert Studio. Overall, this kind of store is a creative hub as it provides freedom of self-expression for consumers.

Technology Epiphanies

The upper-right corner of the matrix is particularly fascinating as it combines technology push and design-driven innovation into technology epiphanies by

empowering new meanings with innovative technologies. Companies who create epiphanies look for ways to realize the new meaning of a new or established product involving new technologies. Importantly it must become meaningful for customers although it may not satisfy existing consumer needs (Verganti, 2011).

Sephora Color IQ service, now available in Sephora locations around the world, is one of the examples of technology epiphany. Pantone launched the first color measuring tool, the CAPSURE, in 2010 and it was not intended for the cosmetics industry. While some beauty vendors aimed at giving their customers endless variety, Sephora followed a different approach. They wanted to help customers learn about their appearance instead of promoting brands. CAPSURE was tailored by Pantone to evaluate the skin of the customers, ensuring a precise color match and providing skin analysis through the Sephora portal. Essentially this technology changed the reason why customers visited the store as they would learn about their skin and personalize their beauty rituals. Developing this concept, the brand founded a beauty hub inside the stores where women got to connect around beauty. This example proves how technology epiphany in retail is different, innovating services rather than products.

Looking at the chart it becomes evident that the strategies, even though following the same goal, are quite different. For example, the playground approach requires deep immersion in the environment where customers are presented with an immersive world in the form of goods, gaming features, or technological innovations. Community hubs, in contrast, have an atmosphere which allows consumers with a lot of independence and they are encouraged to meet their friends or engage in public conversations. While personalization centre requires a lot of contact as with the store personnel, as with the space.

Following this logic, it is possible to compare the strategies across technological complexity, time, space and appearance in customer journey. For example, community hubs are more focused on creating social connections and they are less likely to feel the need to incorporate disruptive technology. In comparison, in order to enable users to access a customized product or service in-store, it often requires the introduction of innovative technology and its unique implementation to become more user-friendly. Reviewing the cases, it seems

that the biggest retailers are the ones that follow the community hub strategy. Such companies devote whole buildings to the idea by ensuring that there are sufficient open spaces for work and rest.

It is worth mentioning that the strategies differ by their role along the customer journey. In fact, retailers wishing to initiate their relationship with customers from their physical retail outlets may develop the playground concept as it raises brand awareness through immersive experiences. The next step is consideration and, at this stage, personalization can bring strategic benefits. Inside customization centres, users can directly change and personalize products. Finally, advocacy is the last stage of the journey where community hubs can be involved as they attract people who are already loyal consumers, provide them with spaces to spend time or take part in events, and they in return spread the word and build excitement about the brand.

INNOVATION FRAMEWORK

In order to enrich the literature dedicated to IoM, especially technology epiphanies, and provide more focus on physical retail, this research adds to the existing knowledge by offering a practical framework, developed from a 5-step process to implement Technology epiphany strategies by Buganza et al. (2015) (Fig. 4).

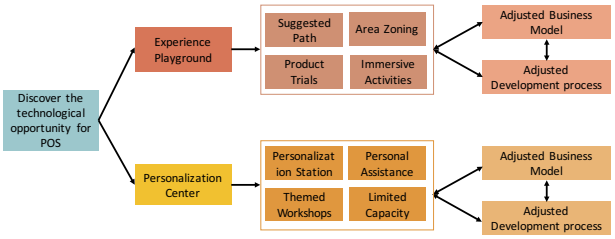

Figure 4. Technology epiphany development process in retail

It is noteworthy to mention that not all of the steps of the process are explained in detail because the focus of this work is only on a part of the 5-step process. Also, as sees from the graph, there are two strategic directions: Personalization Centre and Immersive Playground while Community Hub strategy was not included due to limited cases of technology epiphanies. Below 5 steps that enable successful implementation of Technology epiphany strategies in retail are described.

Step 1: Unveil opportunities hidden in the technology

Firstly, opportunities hidden inside new technologies should be uncovered. They must be vigorously investigated so that new meanings could be generated. As Sephora Color IQ was a result of repurposing an innovative device to

analyze skin and learn beauty habits. All in all, retailers should stay alert about innovative technologies and try to realize how they could be applied to create new value for customers.

Step2: Translate the opportunity into a New Meaning

Following the previous step, technological opportunities should be translated into a new meaning for the relevant industry. Certainly a large pool of knowledge about the market and current meanings is required. Then, instead of directly applying new technology, businesses should define a new reason why people would visit their store. In case of physical retail environments 2 possible meanings leading to epiphanies were proposed by the research: experience playground and personalization centre. It is noteworthy that one is not superior to the other, however, retailers should realize their objective and should work through the previous step to select the best strategy.

Step 3: Develop new features to reveal the New Meaning

When the new purpose is confirmed it is essential to pass it to the customers using an array of features. Unless the ways to realize the new meaning are implemented, it risks remaining on paper. Undoubtedly, the features must be characteristic of each meaning, that is why 2 sets were suggested, corresponding to the 2 strategies.

Steps 4 & 5: Adapt the business model and the development process to the new environment

While the last two steps are out of the focus of the work, they are needed to complete the process and present an opportunity for future research. Since new meaning changes company's strategic direction, as seen in cases analyzed, it is necessary not only to develop a new store concept, but also to make sure that the process of change is successfully carried out by the organization. Consequently, current business models and processes will be ineffective under the new meaning and must be alternated to fit the new reality.

DISCUSSION AND IMPLICATIONS

With retailers experiencing a complex period of changes in technology, business environment, and current situation, they get a chance to re-establish themselves in the eyes of consumers. On the other side of the spectrum, modern customers tend to rely more and more on online shopping for purchasing various

items, from everyday to luxury products. Addressing those issues this research aimed to investigate how innovations in technology and meaning affect physical retail by exploring relevant theory and analyzing through its lens real store examples. Additionally, the research targeted revealing strategies that companies could use to reinvent their POS and developing guidelines that could help businesses to reach technology epiphany.

Using such research methods as literature review, case analysis, and theoretical model application, worthy findings were derived leading to three possible strategic alternatives when applying IoM to retail. In detail, community hub encourages guests to communicate with each other, participate in conversations, and discussions around the brand. It can be used to elevate advocacy and post-sales engagement. While the strategy that targets the personalization of products and services is called personalization centre. Correspondingly, customers can co-create with specialized staff members and the POS becomes a place to try the experience and express creativity. Finally, inside experience playgrounds interactive spaces are built where visitors enjoy themselves and perform exciting activities. This approach is frequently used by pop-up stores and permanent locations where purchasing of items is available exclusively online as the purpose is to raise customers' awareness about the brands and their products.

Based on this, practical guidelines were developed, following which retailers would be able to reach technology epiphany. Specifically, a significant managerial effort is needed, starting from the first step of the process. It is managers' task to monitor the opportunities and to ensure that the strategy is being implemented across the firm. In addition, management must make sure that the old business model is changed to suit the chosen strategy. Not only the top and middle management should be involved, but also operational level changes should be supervised. Moreover, resource investments must be considered as well as company culture is to be renovated.

SUGGESTIONS FOR FUTURE RESEARCH

When discussing findings of the research certain limitations arise, which were addressed in the dedicated chapter, and create possibilities for further elaboration of the argument. In particular, increasing the number of company cases would be beneficial which was restricted

due to time and resource constraints. Furthermore, information regarding other variables could be collected to provide a deeper comparison.

If the range of cases were expanded and additional variables were measured, it would be compelling to perform an empirical study and predict possible financial and non-financial gains that retailers might receive from the strategies. So, using methods of data analysis would help to uncover valuable insights.

One characteristic that stood out from descriptive statistics of cases is the heterogeneity of the range as innovative retailers come from around the world and from various industries. In this way, it would be beneficial to conduct market and/or industry-specific study in order to reveal unique dynamics.

Finally, the paper expands on the first three steps of Technology epiphany development, so it would be useful to investigate in detail how the changes in business models and processes are handled.

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IV. Problem Definition

CHANGING RETAIL LANDSCAPE

Over the previous decade the retail sector has experienced a substantial change, and it continues to evolve rapidly. Despite stores closing, from large retailers to small businesses, thousands of stores closed down in 2018 and big chains are going to have to close hundreds more this year, from Macy's to Target to Starbucks (Wertz, 2018). Those are very frightening statistics, and when presented with these evidence, many make an assumption that physical retail is dying, but it is not evident that it is completely true. There is a shift in consumer preferences and the question remains open.

After the economic crisis of 2008-2009 shoppers around the world, especially in the US, cut back on their spending habits. Being frugal became the reality, when the purchasing decision cornerstone became the price. In 2009, according to U.S. Census Bureau, retail sales in the region fell by almost 4%. Economic downturn gave opportunity to large economical retailers, such as Dollar General and Walmart in food or T.J.Maxx in fashion, which consumers would shop at looking for the best deal. In search for the lowest price, shoppers also used Google searching information on product details and prices from personal computers and mobile devices. Once the perfect offer was found they would order it online, which dramatically changed the relationship between the seller and the consumer (Wahba, 2019). Then online marketplaces began to appear and quickly to take over that undermined traditional retailers even more: the choice offered by numerous online stores that consumers were presented with was endless; retailers did not react quickly to new trends; moreover, physical stores in their numerosity lacked entertainment and appeal.

Retail bankruptcies, from Sears to Barneys New York and Forever 21 and Z Gallery, have recently been reported (Fig. 5).

Figure 5. Major retail chains closing their stores in 2019

In 2019 more than 9300 stores closed down and with 2200 closing in 2020 it raises concerns for future of retail. While some retailers as Barneys New York, Payless & Roberto Cavalli filed for bankruptcy due to financial difficulties and cannot manage to stay afloat, other companies like Forever 21, Calvin Klein & Diesel treat the liquidation of a part of their store locations as a strategic move to change the branding and make steps towards a more successful model (Heichelbech, 2020). A worrying number of store closures in the U.S. continued in 2019 with one of the biggest liquidations of 2500 Payless shoe stores (Fig.6). Also Charlotte Russe clothing retailer closed down and Family Dollar lost its locations to Dollar Tree. While sales volumes are increasing online, famous department stores seem to be struggling: Sears with 70 locations shutting down, Kmart (50), JCPenney (27), Macy's (9), Kohl's (4), and Nordstrom (3) are also closing stores (Tyler, 2018). Retailers in the U.S.A. closed around 100 million square feet in 2017 and record 155 million square feet of retail space in 2018 (Buchholz, 2019). Moreover, 2019 might bring about a new record. However, taking into consideration the big picture, retail sales volumes are steadily growing. Precisely, in 2019 global retail sales volume went up by 2,5% and in 2020 will reach $20.2 trillion in US dollar terms.

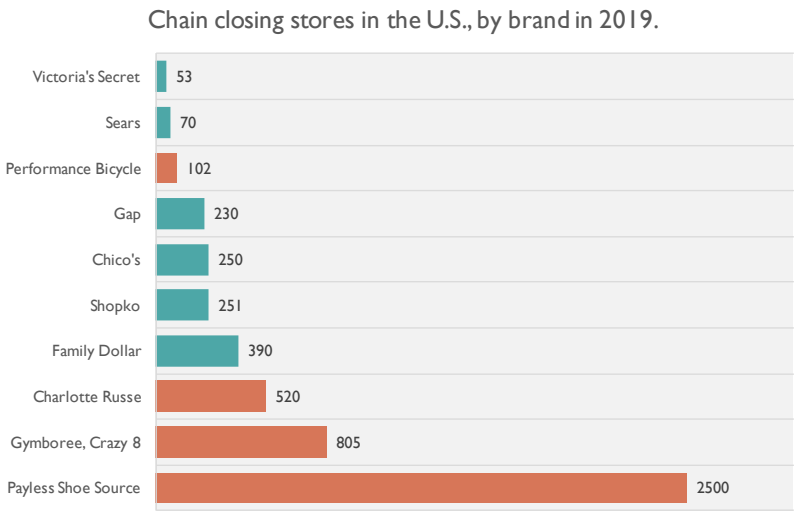

Figure 6. Chain closing stores in the U.S., by brand in 2019. Sourced from: Business Insider

The reality is that retail landscape is undergoing significant changes. Variety does not determine the success anymore, what matters is providing valuable experiences between shoppers and companies. Most companies struggling today are incumbents who dominated the market as they were able to provide the widest variety of products. Basically, they overlooked changing customer behaviors while being focused on the size and scale of

the offer. With increasing technological advancements modern consumers are immersed in entire ecosystems where they may instantly access all products and services they need. Consequently, by the time incumbents recognized the shift it was too late for some of them to adapt.

Moreover, a lot of brands, new and established, seeing the department stores' and mass retailers' rising inability to satisfy consumers expectations choose to drive their efforts to open brand stores or even incorporate direct-to-consumer model. Companies like Adidas, Nike, and Levi Strauss, nowadays, invest more than ever in their branded websites and stores together with new brands, including Glossier, Allbirds, and Warby Parker, who have also chosen D2C approach avoiding wholesale. In the recent years we could witness noticeable bankruptcies and store closures; higher rent costs; increasing penetration of online retail which certainly caused some brick-and-mortar retailers' financial struggles. Therefore, various brands changed their distribution strategy from relying on wholesale retailers to direct-to-consumer model. How to describe direct-to-consumer retail? *"Direct To Consumer retail is the practice of building, marketing, selling and shipping your own product on your own terms by doing away with the middlemen, and taking charge of customer experience (CX) in the process."* (Hasita, 2019) Global market is being disrupted by D2C unicorns in different industries from mattress maker Casper Sleep, to eyewear company Warby Parker, to minimalistic clothing producer Everlane, to make-up and skincare firm Glossier, travel accessories maker Away Luggage and so on. Making a challenge for such multinational companies as L'Oréal and Estée Lauder in cosmetics, Luxxotica in glasses, Samsonite in luggage, the unicorns are able to overcome the competition. Usually the D2C firms are digital natives, which evolve through online platforms like Google, Facebook, Instagram, and Amazon and in many cases outsource the production while occupy themselves with sales and marketing, avoiding retailers and other intermediaries. This strategy gives D2C disruptors opportunity to offer lower prices and maintain rigorous control along the value chain. They are more flexible with distribution strategies as they may combine various approaches: direct shipments to consumers, pop-up stores, partnering with physical retailers etc. But what makes them stand out most is that they do not rely on brick-and-mortar stores for exposure (Shameen, 2020). In spite of their disruptive nature and fast growth these companies may as quickly lose value. On February 6, 2020, Casper Sleep launched the IPO when the company's stock started trading on the

New York Stock Exchange at $14.50 a share, however in only 2 weeks later it lost its value by almost 35%. So, just being D2C does not guarantee success even though even incumbents are engaging to incorporate this business model.

Despite the challenges traditional retailers are faced with in today's changing market and business conditions, some incumbents continue to prosper by finding a new role in the retail ecosystem. In order to succeed in the new environment physical stores shifted their attention from the size and variety of the inventory to creating value, sharing brand identity, providing unique experiences, and collecting shoppers data (Albanese, 2020). Specifically, today department stores are not for browsing for products as it is already done beforehand online. While shopping in a mall customers visit fewer preselected stores and expect to gain additional value during their shopping experience inside the retailer's environment. Another strategy includes downsizing store locations or opening new smaller branded shops or showrooms to fit urban areas and reach changing consumer segments. In this case stores become experience focused not product focused, as stores goals are different: to create a meaningful connection between the brand and customers and to make people want to maintain this relationship outside the walls of the shop.

NEW ROLE OF RETAIL

Having everything in one place, the greatest variety is not anymore unique selling point in the globalized world powered by technology. Consequently, retailers should rediscover their value. A store is not a just destination to acquire a product but it is also a space where people want to be connected and involved. And this change in the perception has already started bringing results. For example, one of the biggest retailers in the U.S. Target increased in value from US$69 per share at the beginning of 2019 to US$127.45 in the end of 2019. The success these companies have experienced is the outcome of two key initiatives that have become their primary foundations: an effective customer experience program and the development of digital marketing in a true omnichannel manner with the brick-and-mortar stores. This has helped the two organizations to provide a consistent shopping experience between the two environments they work in. Companies can no longer view themselves as merely physical stores. They have to realize that physical spaces offer them a unique possibility that most of their digital rivals cannot exploit: delivering unique user experiences to clients in-store. Moreover, there is a possibility to combine both physical

and online spaces into one concept while developing significant customer experience. Customer experience creates value for the customers and it will continue to be the focus of marketing strategies. Additionally, digital and physical worlds can leverage the data and insights to develop meaningful omnichannel experiences.

CHANGES IN CONSUMER BEHAVIOR

From the time of the widespread coverage of the Internet habits and expectations of consumers changed. If before they used to browse across different shops to study the offers, today it has become more common to thoroughly research information online in advance and then make a shopping trip to a certain location. And this is just a tip of an iceberg which businesses are faced with to uncover the black box hiding in modern consumers' minds. In order to better grasp the changing nature of retail it is indispensable to investigate how customers behave nowadays and what is important for them.

One of the most impactful but probably not so obvious trends is hyper connectivity. It is quite surprising that on average adults spend over 9 hour per day on the Internet, following the media or communicating, in the UK, dedicating less time to such essential parts of their lives as sleep or work according to Ofcom Online Nation Report. This tendency derives from the exceptional high speed Internet coverage across the country as almost 93% of households and businesses are connected to the net (Prescott, 2019). In addition, nearly 80% of UK adults used smartphones in 2019 and has elevated by 15% since last year as well as more that third time spent online attributed to social networks owned by Google and Facebook (Boyle, 2020). If we change perspective from European to North American consumers, similar observations can be made. While going into detail and looking at different age groups, Generation Z users seem to spend even more time engaging with digital content: on average 11.4 hours and Millennials dedicate normally 10.9 hours (Abramovich, 2019).

However, not only the time spent online contributes to hyper connectivity, but also multi-screening and multi-tasking between different devices an platforms assure the constant flow of content. According to a research conducted by Google, 90% of multiple device owners switch between screens to complete tasks, using an average of three different combinations every day (Gevelber, 2013). Multi-tasking between various applications using several devices in one session is turning into a new standard for users.

For instance, an average process may start on Instagram, clicking a link in someone's account that leads to a web site, followed by googling and then clicking on an advertisement and ending in a business specific app. The consumer may check messages on Messenger and WhatsApp before going back to Instagram. Moreover, some parts of the session may be done from a smartphone, others from a PC or a tablet. It is a whole new environment that companies are faced with because consumer behavior involves complicated paths across an array of applications, devices, and brands which is hard to predict but even harder to control. An ability to generate constant flow of content towards consumers enables to reach them in their digital lives. Additionally, it opens up new opportunities for brands to develop new and original experiences.

The fight for consumer attention becomes even more challenging when on-demand economy is considered where customers can effortlessly get what they and when they want it. The more companies are able to instantly satisfy consumer needs, the higher become new standards for customer expectations. This may not look surprising, however, a study found that 35% of users get easily irritated by slow page loads. Additionally, more than half (51%) may completely abandon the content if the loading time is too long (Maida, 2018). Users will except no failure and the baseline of developing a great experience is one that works. Basically, customers demand from brands to make every point of interaction memorable, so companies are pressured to provide as original and personalized content as possible in the shortest period of time. If brands manage to reach these requirements, they gain trust and advocacy and this makes the baseline of creating customer experience.

Amazon, Uber, Lyft, Postmates etc. are pioneers of on-demand economy from which users except an instant access not only to information, but also to products and services in real time. As evidence of rising customer expectations, Google found that the number of searches about one day shipping has gone up by 120% since 2015 and most often was made during morning hours. This may be explained by consumers suddenly realizing in the morning that they need something during the day but do not wish to sacrifice time and extra effort, so they opt for express delivery. So, on-demand economy consumers are willing to pay premium price for extra convenience. As one may notice, the overall shopping pattern became on-demand. Shopping is not a planned activity anymore, it happens rather in various unintentional moments while doing something else, during so-called "micro-moments". Shopping micro-moments occur in various points of the day for

different reasons so it is important to sense and catch consumers in those particular moments. Sometimes a person can be looking for a gift for a birthday party, groceries, or cinema tickets doing so simultaneously during his or her workout or during lunch break. The combinations of circumstances are endless, moreover, shopping for basic consumer goods, such as food items, can be done in portions during the week instead of doing one substantial trip to the supermarket per week. Nowadays, consumers enjoy buying “in the background” while performing other tasks (Soumik, 2020).

Another significant consumer trait is their trust in social media: 98% of Gen Z users, 85% of Millennials, 70% of Gen X, and 52% of Boomers trust social networks (Barrett, 2019). Since most age groups do not have doubts and Millennials hold a great part of spending power social media will continue to be exploited as an important marketing tool. With a relatively new option to purchase goods straight from Instagram targeting and personalization are significantly improving on the platform making it an easy and convenient way of shopping. Several studies suggest that consumers prefer personalized content developed by the brand, however without being too intrusive. Additionally, they find unrelated and dull content disturbing.

Hardly a new trend but one that is becoming mainstream today is responsible consumerism. The buying is easier than ever and consumers consider those brands that help them make better more responsible choices for the planet and society. One of the activists of the movement can be called Ikea that challenges customers to make social change, Nike that aligns with its consumers’ social issues and environmental concerns, or For Days startup that makes waste free clothes and encourages temporary ownership. Purpose-driven consumers make up for 66% of Americans who are willing to buy products from brands that fit their lifestyle and with their values and beliefs (Cone, 2018). While 57% will pay a premium price for such offers. Purpose-driven consumers are also more flexible: they consider changing their shopping habits to contribute to social impact and wish to invest effort into sustainability and recycling. Awareness of global environmental problems is rapidly transforming consumer habits everywhere they reside. Substantial numbers of people have already adopted back-to-basics mentality, opting for plain, fresh goods with less or no preservatives or artificial elements. Sustainable development is at a tipping point. When consumers are gradually adopting social causes, they are searching for products and brands that suit their principles. Nearly six in ten respondents questioned are able to change their buying patterns to reduce their effect on the environment, according

to the latest IBM 2020 Consumer Research. Approximately eight out of ten contributors suggest that sustainability is significant to them. Then for those who say it is very/extremely important, over 70 percent would, on average, pay a markup of 35% for organic and environmentally friendly brands. Values are of equal importance as meaning. Consequently, most consumers fall into two categories: value-driven consumers mainly trying to get the value of their money and choose products based on price and comfort; and users who select brands that suit their moral beliefs and are prepared to act in terms of sustainability, behavioral change and even paying the premium. Consumers are more and more looking for products with certain attributes which conform to their values, and therefore the proper selection is a key difference. Though, a quick and convenient shopping experience is high up on the list of consumers ' demands. In addition, brands and retailers are expected to simplify lives by all groups surveyed.

There is no doubt that digital and physical worlds are converging leaves the mark on consumer behavior. Even though digital provides more exposure and comfort, shoppers still want the benefits of seeing, experiencing and enjoying shopping in the real world. Indeed, phygital retail approach enables a shopping experience away from standard models that merge the physical and digital into distinct platforms for consumers, in which physical environments and digital technologies engage with each other; complement one another; merge together to build a shopping ecosystem. Phygital means optimizing physical networks by combining new technology and information (TecnaUK). Whereas digital channels, on the other hand, seek to replicate the unique, personalized experience that is usually only possible in-store.

Despite considerable e-commerce growth, it still makes up for just over 5% of all retail sales. While connected smartphones evolve, shopping experience might be transformed. Roughly half of all mobile users now use their smartphones to carry out product research (Butt, 2020). More consumers are expected to use smartphones and tablets to complete the transactions, too. The convergence of mobile retailing and multichannel strategies will change the shopping experience and start the 3.0 Retail era. Although e-commerce has generally shown growth over the years, it can be observed that there has been a significant increase in popularity particularly of mobile commerce among customers. In particular, mobile device sales have more than doubled over a six-year period increasing from 7% to 17% according to PwC's study, suggesting it is close to outperforming the most traditional online purchasing method–the personal computer–

which has experienced a 7% drop (PwC, 2020). This seems to imply that users have shifted from buying on their PCs to their mobile devices–making it essential for stores to reach buyers on their favorite platforms. But mobile phones have proven their popularity not only while shopping online. More and more customers use their cellphones to complete purchases in-store, which customers have booked in advance, through in-store applications or mobile payments at checkout. In fact, the PwC survey shows that nearly half of the participants chose contactless payments over conventional payment options. Sometimes the combination of physical or human elements into digital experiences can lead to better shopping experiences, especially in areas where conversions require education, interpretation or customization. Consumers are constantly connected in 2020, and have an overwhelming opportunity to instantly access products and services. Hence, the pressure on brands and retailers increases not only to enable continuous customer experiences but also to do so efficiently.

THE RESEARCH SCOPE

After seeing the dynamic changes in retail sector and consumers it becomes evident that business environment requires new ways of involving customers. Nowadays, consumers can shop 24/7 and anywhere. So, it is more important than ever for companies to study their habits, leveraging new technologies, in order to understand what, when, and where to offer. So, retailers are divided in two main camps: those who are transferring the majority of their activities online and those brands that are trying to redefine physical points of sale (POS). Specifically, the second group manages to provide a new value to the customer, that is different from just the activity of purchasing products. Additionally, while there is an extensive pool of research focused on digitalization, much less literature exists investigating the new role of physical retail. Combined with the interpretation of innovation of meaning (IoM) theory in retail, the research scope is focused on uncovering the new reasons which retailers can provoke within people to visit physical stores; the new “why”.

The aim of this research is to study innovative solutions, in terms of technology and meaning, that companies develop to drive consumers inside their POS and understand which generalized strategies can be identified to include them into a strategic framework. One of the noteworthy contributions of this work is current solutions analysis, where innovative cases are investigated from different perspectives company by company. Then

the cases are compared to find similar patterns with the aim to suggest Technology Epiphany strategies and to provide guidelines to shape them.

The final framework will be developed representing a step-by-step process to be applied to the retail sector. It will contribute to practical applications of innovation of meaning theory and will allow to understand how specific innovations in technology and meaning could be implemented in physical retail.

V. Innovation in Retail

INTRODUCTION

Despite the increasingly changing market environment, the needs of customers keep influencing their buying decisions. Consumers take most of the purchasing decisions, but emerging technology, alternative business models, and big data / machine learning imply that the world of retail is about to completely change (Grewal et al., 2017). As a result, there is a growing need to examine key retail sectors in which technologies are shifting the competition, so that we can accurately assess where the retail can grow in the future. In new, multi-sided, omnichannel worlds, customers are overwhelmed with data about products and services. Companies who can communicate with their clients by delivering relevant content and creating value stand out and have the ability to establish meaningful customer interaction. Nowadays, technology may help retailers attract target customers while also allowing them to make better-evaluated decisions on which goods or services to purchase (Grewal et al., 2017). However, not all customer choices rely on comprehensive data analyses and thorough decision-making cycles. Some choices are random, taken instantly while wandering online or in stores, often triggered by clever visual representations and product varieties created by the seller.

Therefore, creating and delivering desirable retail customer engagement that matches or exceeds market needs is essential in attracting visitors to their stores, arguing that the importance of consumer experience in physical retail locations cannot be underestimated (Das et al., 2019). Currently, some retail spaces have progressed into so-called "interactive retail theatres" showing that stores are designing and offering their customers with an enjoyable experience (Morya et al., 2020). Consumer interaction with retailers covers a number of factors, such as their exploration of products at retail locations, their communication with sales personnel, point-of-sale support, and ordering and payment (Nikhashemi et al., 2019). As a result, proliferation of technologies and customer preference set the stage for a modern retail environment. As this tendency rises, a deeper understanding of the responsiveness of retailers to the technological changes is required (Willems et al., 2017; Pantano et al., 2018). To its end distributors Clinique, for instance, launched at its counters in large shopping centres in Europe, the US and Asia, Apple iPads available to customers to analyze their skins and deliver comprehensive and tailored advice (through a customizable skincare tutorial), while the app regularly handles more than

180,000 product configurations to suit the needs of each customer and offers personalized recommendations through a generated handbook.

Because companies, which engage in traditional retail, function in a highly dynamic and unpredictable environment, a better understanding of retailers' ability to evolve to compete effectively serves as a key factor in achieving company success. That is why in the next chapters innovations that can be implemented in retail will be investigated. These technological innovations will be focused on valuable shopping experiences that have potential to upscale services in retail by adding convenience, entertainment, and engagement to the in-store experience.

RELEVANCE OF PHYSICAL RETAIL

Brick-and-mortar stores are not leaving the stage. It is estimated that in-store sales will still account for from 75 to 85 percent of total sales by 2025 (Breuer et al., 2019). However, the regular store is no longer a place to purchase items. A physical store location today performs a number of possible tasks: it may serve as an immersive showroom for brands, a fulfillment centre for online purchases, a place where friends can try new things and take photos that they then share on social media, or a hub for finding ideas and inspiration. This is quite common for the brand to gain low revenue and earnings within its brick-and-mortar stores and at the same time highly contribute to overall company’s sales and success.

Top 10 retailers in the world contributed 31,6 per cent of the overall retail sales of the top 250 companies in 2017, with a rise of 0,9 percent over the last year, according to the 2019 Deloitte Global Powers of Retailing report. Additionally, the three largest retailers maintained their positions, while Amazon went up 2 positions to the fourth one with the fastest online sales increase of 25,3 percent. However, Amazon is the only online seller in the top 10, moreover, there are just 8 of them among the 250 biggest firms. This statistics support the fact that offline retail keeps being the prevailing channel across all geographies, although online sales are rapidly increasing year after year.

As we have previously seen departments stores, malls, and large retailers are struggling and some of them have even to declare bankruptcy. On the other side of the business, digital natives invest in brick-and-mortar locations. Digitally native brands are now launching and increasing their offline presence at a high rate, with 850 locations

anticipated to launch in 5 years, according to real estate company JLL. They are investing because they believe that customers will continue to engage with these brands, whether online or offline. The stores may be cutting o their retail spaces, but they still highly depend on offline presence to increase customer demand. The prospect of balanced consumer spending and affordable retail floor space prompted a variety of retailers to open pop-up shops (Lipsman, 2020). Similarly, D2C beauty label Glossier has recently launched a pop-up event in Chicago that drew lots of Gen Z and millennial brand fans to visit and test cosmetics and skincare items.

TYPES OF INNOVATION IN RETAIL

Even though one can find different kinds of innovations, even a general definition is hard to point down due to its growing relevance and popularity among modern researchers. This work does not have as one of the goals to define the term, moreover, for the purposes of current research it is important to understand different types of innovations that exist and how they are reflected in retail. So, summing up explanations of innovation coming from different sources it becomes clear what unites them: innovation in its core is an original concept, presenting something that was not there before. It is noteworthy to mention that depending on various factors, different ways to categorize innovations were proposed. From an initial glance, it may seem that innovation should be strongly related to a product or process, however, marketing and organizational innovations also exist. For instance, as specified by Joseph Schumpeter (1934) there are new products, new methods of production, new sources of supply, the exploitation of new markets, and new ways to organize business innovations while innovation itself is explained as new combinations of existing resources. Being of one of the advocates of innovation as a driver of economic and social change, he was definitely not the only one who proposed a classification of innovation. Therefore, it will be valuable to investigate which typologies of innovation were introduced by other researchers and were also used with relation to retail industry. In order to make the findings organized a table was developed where innovations are grouped by different aspects (Fig.7).

INNOVATION ASPECTS	INNOVATION TYPOLOGY	MENTIONS RELATED TO RETAIL
OBJECT	Product and Process Innovations	Hall and Wengel, 2014; Shankar et al., 2011; Kantar World Panel, 2019; Esbjerg et al., 2016; Davies, 1992
SOURCE	Market push and Technology pull Innovations	Boletsis & Karahasanovic, 2018;
STRENGTH	Incremental and Radical Innovations	OXIRM, 2014; Reynolds and Sundström, 2014
EXPOSURE TO CONSUMER	Ten types of innovation framework	Curley & Salmelin, 2013; Popa, 2014; Keeley et al., 2013; Boletsis & Karahasanovic, 2018; Bahadur & Doczi, 2016
TECHNOLOGY INTENSITY	Technological and non-Technological Innovations	Boletsis & Karahasanovic, 2018; Pantano & Viassone, 2014; Hung et al., 2012; Pantano & Di Pietro, 2012
ORGANIZATIONAL STRUCTURE	Business Model Innovation	Sorescu et al., 2011; Christensen & Tedlow, 2000; Li & Ku, 2017
SPEED OF ADOPTION	Innovation Diffusion (from Innovators to Laggards)	Pantano & Vanucci, 2019; Rogers, 2003

Figure 7. Innovation types

According to European Commission, in its annual 2015 report on retail competitiveness 4 types of innovation were specified: product, process, marketing, and organizational with 2 subcategories that were transversal to all other types: technology and sustainability. Setting a benchmark for business, it offered a complex view, however, stressing the importance of technology and accepting that the importance of product innovation in retail is lower that the process and marketing ones. In fact, some researches support this point of view and state that innovation usually takes place in infrastructures such as settings, product arrangement, or information technology, rather in products themselves (Hall and Wengel, 2014; Shankar et al., 2011). New product development is likely to conducted on the top vertical integration, by the manufacturer, and not by retailers. These cases happen when a firm is actually not vertically integrated and so the difference of interests between suppliers and distributors arises, as manufacturers, being more diversified, are more prone to risk than retailers (Esbjerg et al., 2016; Hall and Wengel, 2014; Shankar et al., 2011). Therefore, retailers are more involved to incremental changes and not radical innovations (Oxford Institute of Retail Management (OXIRM) & Saïd Business School, 2014). Moreover, it was suggested that retailers favor open innovations in collaboration with partners, additionally, in partnerships

they adopt more often technological innovations, including self-scanning, loyalty marketing systems, new payment methods, mobile and online platforms (OXIRM, 2014; Reynolds and Sundström, 2014).

On the other hand, there are those who assert that there are no constraints for a retailer to engage either in process innovations, or in product innovation, or even in both simultaneously. In fact, a model of retail innovation was proposed which supports both strategies, however, with an essential focus on creating differentiation as a key to profitability (Davies, 1992). The goal of innovation is seen as contributing to differentiation. According to this model, competitiveness of a company is sustained by a combination of product and process innovation. Moreover, it warns firms that their innovations can be copied and, therefore, differentiation decreased, however, acting on the other dimension will help to regain the positioning. In contrast, the retailer can confront the competitor's innovation with a new solution. If it is not able to find a responsive strategy, the business succumbs to the innovator. Summarizing, the model entails two forces acting on both innovation types, expanding and constraining the retailers' business (Davies, 1992) (Fig. 8).

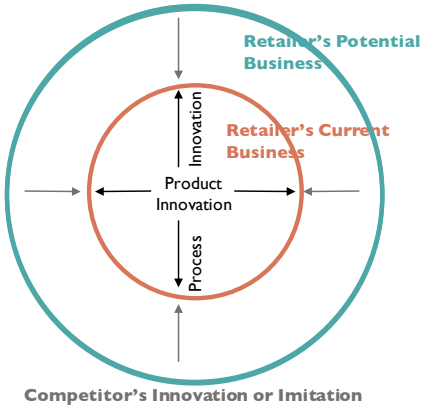

Figure 8. Retailer innovation. Sourced from: Davies, 1992

While most works tend to reach for a traditional and more general typology, some aim to capture a complete spectrum of innovation (Popa, 2014; Keeley et al., 2013). One popular typology is Ten Types of Innovation Framework that claims to be a "a powerful framework" for deeply understanding the complexity of the phenomenon in retail by the EU Open Innovation Strategy and Policy Group (Curley & Salmelin, 2013). Clearly, it consists of 10 innovation types, however, in order to adapt the model to retail industry it was structured in a way, so that the innovations stretch along a line from internal to the company innovations that are not visible to final customers to the ones focused on consumer's engagement (Boletsis & Karahasanovic, 2018). These innovations also differ in complexity, especially when combined. Essentially there are companies who use simple innovations, 1

or a combination of 2, while others who follow complicated market changes pursue more categories to develop a sophisticated innovation strategy. In addition, these innovation types are positioned along value chain creation, from development to marketing of a product or process. The aim of this framework is to prove that companies must pay attention to more activities across the value chain and not just product or process creation (Bahadur & Doczi, 2016). As for retail application, the research observes that new technology applications are mostly used for onstage innovation, branding, and marketing, when there is a limited number of applications for backstage, internal innovation processes. So, firms are focused on innovations in experiences. However, they could leverage new technology to boost innovations in internal organizational processes, addressing structure and process innovation and letting consumers and stakeholders participate in value-generation process with co-creation and open innovation models (Boletsis & Karahasanovic, 2018).

CONFIGURATION				OFFERING		EXPERIENCE			
PROFIT MODEL	NETWORK	STRUCTURE	PROCESS	PRODUCT PERFORMANCE	PRODUCT SYSTEM	SERVICE	CHANNEL	BRAND	CUSTOMER ENGAGEMENT
how an organization makes money	how an organization connects with others to create value	how an organization organizes and aligns its talent and assets	how an organization uses signature or superior methods to do its work	how an organization develops disting-uishing features and functionality	how an organization creates comple-mentary products and services	how an organization supports and amplifies the value of its offerings	how an organization delivers its offerings to the customer and user	how an organization represents its offerings and business	how an organization fosters compelling interactions

Figure 9. Ten types of innovation framework. Sourced from: Keeley et al., 2013

Referring to models mentioned above, what unites all of them is that technology becomes an inevitable driver of innovation. The definition of innovation derived from statistical standards developed by international organizations such as the IMF, OECD, Eurostat, ILO suggests four innovation types that include product innovation, process innovation, marketing innovation, and organizational innovation. In complex, these four types are then compared and regarded as technological innovation and non-technological innovations (OECD & Eurostat, 2005; Schmidit & Rammer, 2007), highlighting the importance of technology. However, some researchers argue that a lot of retailers have not leveraged new technologies yet (Pantano & Di Pietro, 2012). While there are numerous cases of product innovations with the help of new technologies, the retailers rarely apply

them to renovate physical stores. However, those who have been able to join the technological stream most frequently introduce self-service technologies, digital signage, mobile applications and ubiquitous computing (Pantano & Viassone, 2014). Self-service technologies are gaining momentum as they exploit the benefits of self-service systems using interactive tablets, which often provide for deeper interaction with products. In this way, these technologies are often deployed by large retailers (e.g. Ikea, Carrefour), eliminating the necessity of interaction with employees (Hung et al., 2012; Pantano & Di Pietro, 2012). In addition, these types of stores have been increasingly introducing automatic payment stations that allow for cashierless pay, stressing time-saving incentives and decreased lines. Also, some apparel companies, such as American Apparel, have recently launched self-service platforms for customization of their own t-shirts.

Since innovations are approached by different companies in different ways and times a question of innovation diffusion arises. Using Rogers Innovation Diffusion Theory (2003) several studies managed to position different industries of retail along the scale, dividing them into Innovators, Early Adopters, Early Majority, Late Majority, and Laggards (Pantano & Vanucci, 2019). In total, 22 sectors were analyzed and results justified that just a few retailers involved more than 3 innovative technologies, which they attributed to their large size (Fig. 9). In fact, relatively small retailers specializing in sweets, souvenirs, and fashion accessories were classified as laggards. Contrastingly, Legwear and beachwear, underwear, telecommunications, fashion/footwear, fashion and homeware and entertainment make up the early majority. While watches, toys, sunglasses, and jewelry companies are Late Majority. Early Adopters included brands from fashion industry as well as beauty and healthcare companies, while the only innovators were fast fashion giants, like Zara, and Sportswear & Footwear firms. When combining the results of distribution between size and industry, major retailers specializing in fast fashion or sports are the innovation enthusiasts, depicting a limited number of businesses who are technology pioneers (Rogers, 2003). These findings give a better picture of which industries manage to innovate in retail and which are late to the game.

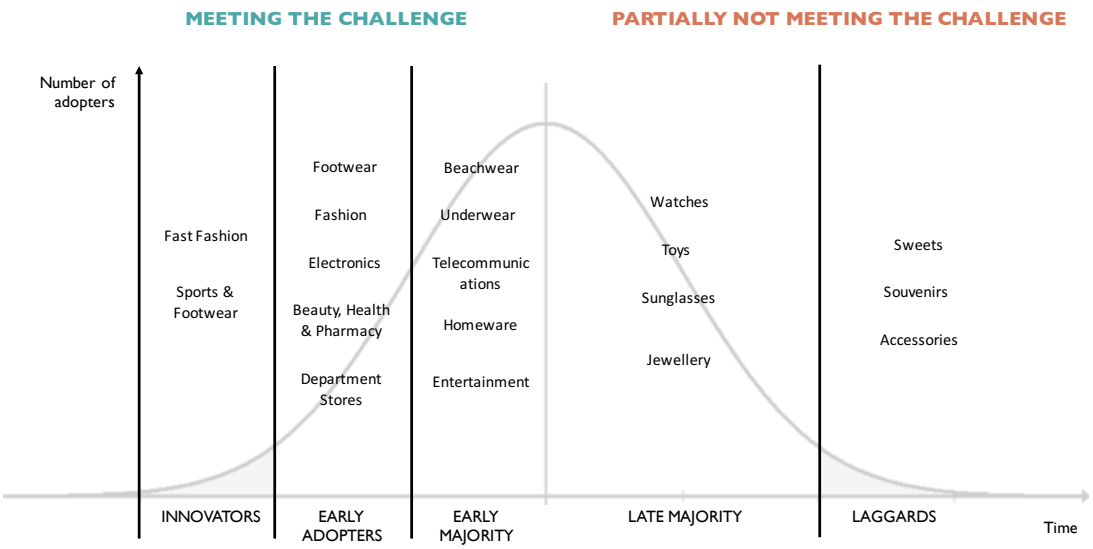

Figure 10. Innovation adoption among retailers. Sourced from: Pantano & Vanucci, 2019

Raising the complexity of innovation process in companies, it is inevitable that at some point it will reflect on their business models. Especially in today's world when innovations should be continuously delivered, regardless the industry, innovation should become a part of company's culture. In order to embed it, changes in business models must be planned. As far as the business model in the retail sector is concerned, it is characterized by how consumers and the marketplace derive sufficient value from the company. The formation of values is based on three key principles, namely consumer efficiency, consumer effectiveness, and consumer engagement (Sorescu et al., 2011). Innovation in the retail business model is better understood through the key elements of the context in which the operations are coordinated, the kinds of tasks that are carried out, and the extent of participation of the managers in the planning of those operations (Sorescu et al., 2011; Christensen & Teldow, 2000). The business model of retailing has been evolving over time from specialty stores to catalog retailers to shopping malls and so on (Fig. 11).

Figure 11. Changing Retail business model. Adapted from: Christensen & Teldow, 2000.

The conventional retail model (bricks-and-mortar) is a shop in direct interaction with the buyer (Li & Ku, 2017). Clients can purchase items in the shop, while the online

shopping concept is where consumers are browsing item details via the online to complete the purchase. Even though the conventional business model and the digital retail model have their own benefits and drawbacks, the retail sector has started to merge them. It's often labeled as clicks-and-mortar model. This new concept lets the consumer browse in the supermarket and access and purchase items anytime anywhere on the Internet. Business model evolution is slowly changing over time from early department store business, eventually from a mail order and discount store selling concept to a digital business model (Christensen & Tedlow, 2000). In the retail sector the form of business model is more organized and systemic. Due to the exponential growth of online shopping, the traditional and online retail models are becoming integrated.

OMNICHANNEL RETAIL

"In the past, brick-and-mortar retail stores were unique in allowing consumers to touch and feel the merchandise and provide instant gratification; Internet retailers, meanwhile, tried to woo shoppers with wide product selection, low prices and content such as product reviews and ratings. As the retailing industry evolves towards a seamless ***omnichannel*** *retailing experience, the distinctions between physical and online will vanish, turning the world into a showroom without walls,"* Brynjolfsson et al. (2013) describe.

Omnichannel retail is based on a business model where numerous channels are used and are completely integrated in a unique seamless shopping environment. Consequently, under omnichannel management a management process is defined which ensures synergy as well as optimized customer experience across the selected channel and touchpoints (Verhoef et al., 2015). Moreover, omnichannel strategy requires centralized data management blurring the differences between online and offline channels. Therefore, consumers can freely move along their customer journey not necessarily following a linear pattern imposed by companies, which means that they can start their experience in an online channel, then go to a physical store, then decide to finally purchase at a cheaper price online and later come back for after-purchase service to the POS and so on. Essentially they can easily orchestrate multiple channels at every stage of the journey personalizing them every step of the way (Rigby, 2011), considering all possible options across all available channels and optimizing their shopping experience. In spite of being usually related to sales channels,

omnichannel strategy because of its specificity involves relevant omnichannel marketing, finance, and supply chain management.

Quite frequently omnichannel strategy is perceived as an incremental development of multi-channel concept, however, it is not always true. Both strategies do entail adoption of many channels but while multi-channel models manage them autonomously, omnichannel environment is integrated and dependent. Additionally, omnichannel retailers develop a data management centre from where they are able to synchronize the flows of different channels. This allows customers to freely switch between online shops, online marketplaces, social networks, physical POS eliminating any barriers and uniting all of them in one transactional process (Rosenblum and Kilcourse, 2013; Hybris, 2012). Hence, it creates a seamless shopping experience blurring channel boundaries for the consumers. It is noteworthy that omnichannel retailing is developed with customer centricity in mind, while multi-channel approach focuses on retailers' perspective and what makes the new strategy so relevant in today's world. By always putting customer glasses on these firms manage to better satisfy users' needs and prioritize customer profitability over sales.

Recent technological innovations, such as high-speed internet connection, data management and big data, real-time intelligence etc. have been contributing to retail industry evolution. For instance, many large retailers such as Walmart, Decathlon, Sephora and Amazon are investing in new technologies that will improve cross-channel experience (Reddy, 2015). It is noteworthy that not all countries are equally adopting the strategy, specifically, top 10 regions were identified by the popularity of the concept which included North America (USA), Europe (UK, Germany, Holland, France, etc.), East Asia (China), Oceania (Australia). In addition, the USA and China most frequently publish papers on omnichannel retailing which correspond with the prevailing amount of initiatives undertaken by the companies with headquarters in these countries. In detail, American Amazon and eBay, and Chinese Alibaba and JD strongly invest in omnichannel retail (Cai & Lo, 2020). In this way, there are all signs present to say that omnichannel retailing will become the predominant strategy in the industry, opening new possibilities for researchers to investigate both digital and physical worlds with relation to different sectors (Forrester Research, 2014).

However, the transition from multi-channel retailing to omnichannel is complicated: it poses a challenge for companies to change their strategy which is often not welcomed (Picot-Coupey et al. 2016). Moreover, different strategies are needed for digital natives and

for conventional retailers: one is called from clicks-to-bricks (Pauwels & Neslin, 2015) and the other from bricks-to-clicks (Gulati & Garino, 1999; Kumar et al., 2012). While it is more common that brick-and-mortar retailers open online stores, it is trending among born-digital companies to open brand physical stores in forms of permanent stores, showrooms, or pop-ups. Companies like Amazon, Apple, Dell Computer, Bonobos and JustFab are considered the pioneers of the brick-and-mortar transition (Herhausen et al., 2015). Likewise, an online brand of cosmetics called Glossier after its success online opened several pop-up stores in the USA and Europe so that the customers could try out the products before buying. Warby Parker is another digital native, offering affordable glasses, has recently opened a flagship store in New York. Not everyone knows that Amazon's first brick-and-mortar location was Amazon Books in San Diego where the books displayed included titles with the best Amazon reviews.

Contrastingly, an opposite strategy would be suitable for traditional retailers that choose to expand online (Fig. 12). Introducing e-commerce channel means transforming the supply chain, operations, cost structure, degree of market segmentation, access to demand/supply information, and managing returns (Kumar et al., 2012). More and more companies, retailers (Walmart, Aldi, Costco) and producers (Nike, P&G, Zara), have adopted e-commerce in their strategy (Grewal et al., 2004). Acquisition of ecommerce operations by brick-and-mortar firms is also taking investment from store expansion. Walmart, the world's largest grocery retailer, is decreasing its rate of new supermarket launches at the same time as putting investment into acquisitions of online players (Planet Retail, 2017). Moreover, retail specialists suggest that e-commerce will make up for 25% of total global chain retail sales by 2022, up from 8% in 2012 (Planet Retail, 2017).

Figure 12. Retailers investing in digital acquisitions. Sourced from: Planet Retail, 2017.

EXPERIENTIAL RETAIL

As companies actively engage in omni-cahnnel strategies and conventional retailers look into how to incorporate physical stores into the customer journey, experience becomes a turning point. The retail business encounters fast transformations coming from a rapid share growth of online and mobile commerce. However, brick-and-mortar stores intend to maintain their positioning by providing one of a kind unconventional experiences (Grewal et al., 2009; Jahn, 2018; Verhoef et al., 2009). Retailers are discovering elements that cannot be replicated online, where sensorial engaging experiences becomes a top priority. They would like to turn daily shopping into a special event or destination for customers and they have begun to redesign their outlets into unique experiences.

In fact, various brands, including multinationals like Samsung and Adidas, have been putting money in experiential flagship locations in capitals, such as New York, London, and Berlin. Why? *"The purpose of the format is three things: discovery, community and convenience,"* says Rachel Shechtman, Macy's chief brand experience officer. *"About a year ago, we started talking about creating a brick-and-mortar model that would stay relevant 10 years from now. Physical spaces need to provide a value that you can't get from your couch."* It is a deliberate strategy to create experiential stores that have much more to offer than just items; they make efforts to engage consumers in the brand and culture. Essentially, experiential stores are made to create out-of-the-box services to the visitors, where selling products is not on top of the list but to enhance brand image and foster interactions with customers. They aim to entertain visitors rather than to push sales. Experiential retail concepts may include showrooms, pop-up stores, and flagships which create a story. Brand values, personalized services, exclusive collections, pre-releases are introduced to experience the brand in a new way, adding to traditional brand touch points (Borghini et al. 2009; Nierobisch et al. 2017). Specifically, the store is treated as a central brand touch point. Moreover, most experiential stores are built by manufacturers, brands themselves, rather than retailers in order to limit external influence and have a more genuine brand experience (Lemon & Verhoef, 2016). They allow for tactile and more intense services (Peck & Childers, 2003) which inspired researchers to analyze the concept across new flagship locations (Dolbec & Chebat, 2013; Nierobisch et al., 2017), pop-up stores (Klein et

al., 2016; Robertson et al., 2018), brand museums (Hollenbeck et al., 2008), and showrooms (Bell et al., 2018).

It is true that any kind of experiential store evolves around experiences. However, how should these experiences be to satisfy the customers? To answer this question a Forbes article was analyzed (Maloney, 2018) as it identifies 6 dimensions of a retail experience which, however, should be adapted to the new concept.

1. Purchase

   The original article states that intuition is essential and is considered as how easy it is to find the right product in the store. It suggests that even though experiential stores offer unique experiences, they must satisfy consumer needs to purchase. If customers don't manage to quickly locate what they were looking for inside the POS, they would leave disappointed (Maloney, 2018). However, later researchers argue this notion and state that the physical act of purchase should never be the aspect of in-store experience that retailers depend on to attract consumers into their shops (Kurpiel, 2019; Trotter, 2019). In fact, experiential shop's priority does not entail reaching offline sales targets, it is rather immersing visitors into a brand and its culture. For example, Glossier makes a good case of customer-centric company that opened a physical store focused on customer touchpoints. A couple of years ago, in 2018, the skincare brand announced its first flagship in New York after opening several pop-ups here and there and testing the ground. The store completely corresponds with everything the company stands for: innovativeness, thoughtfulness, and fun. *"In our NY flagship store, there is no stationary place for transactions. Our customers come to get lost in an experience, trial and conversation. The showroom editors offer peer-to-peer recommendations. When you're ready to buy, editors check you out on an iPad wherever you may be in the store. The product is then delivered from the sky via a conveyor belt. It's a magical experience."* In spite the fact that there is no checkout area and purchases, if made, ordered online, their target consumers willingly wait in line to enter the store.

2. Human Touch

Human touch is something that consumers look for in brick-and-mortar stores. It is true that consumers do not always fell encouraged to interact with staff in conventional settings, however, in case of experiential retail the role of the personnel becomes different and, consequently, they create a different impression. Instead of doing people watching, employees are selected to become brand ambassadors. If we remember a body care brand Lush, one of the first things that comes to mind is how well their salespersons are trained. Not only they know every detail of any product in-store, but also have a participative energetic attitude and actively engage consumers in experiences around the store. Many would agree that a conversational platform is essential in-store, where they can communicate with brand ambassadors who can listen to their needs and provide expert opinion. With this approach, stores such as Nike, REI, Nordstrom, and Sephora leverage on human interaction in their experiential sites. These retailers believe that human, personalized advice is in the centre of a great experience (iAdvize, 2019).

3. Accessibility

Omnichannel retail has been developing at a high pace in recent years, however, there are still companies which have difficulties in providing a unified and seamless experience across the entire array of channels. At the same time, customers express their needs to retailers in raising the accessibility of product and services by appreciating mobile payments in-store, faster checkout time, and faster allocation of desired items inside the store (Maloney, 2018). Certainly, convenience and accessibility of online shopping is something that is hard to compete with digital companies, such as Amazon which has several physical stores in the US but over 100 million customers. Shops that are accessible and easy will continue to drive the audience inside. In fact, a research by Forrester (2012) witnessed that the most important factor for 66% of consumers in a company is how it values customers' time. So, users may truly value company efforts in applying new technologies in order to reduce waiting times or eliminating the conventional checkout at all. In addition, they might introduce direct home delivery eliminating the need to keep stock in-store (Trotter, 2019).

4. Immersion

Experiential stores should be immersive. They expect their experience to be unique, aesthetically pleasing, welcoming, and visually memorable. Often, these stores are well-curated and promote shareability among customers. For example, it is common for them to create such environments that let visitors take pictures and share them on social media (Trotter, 2019; iAdvize, 2019). In addition, experiential retailers provide themed events and in-store services, including new product reveals, tutorials, holiday celebrations, courses, and even private events (Kurpiel, 2019). Immersive experiences demonstrate how acting on the delivery of things for consumers to engage in and contemplate make them want to come back to the shop (PYMNTS, 2020). For instance, Lululemon's central location in Chicago placed a healthy café inside, conducts events, regular meditation sessions and fitness courses. To summarize, most experiential stores make it possible for human senses to participate and get connected because their aim is to make memories of what customers feel, hear, see, smell, and touch which rest in their heads together with brand impression (Storefront, 2018).

5. Personalization

Shoppers look for personalized services. However, in today's world personalization goes far beyond putting initials on a wallet and it starts with data. Brands need to collect and analyze customer data in order to build a tailored shopping experience. While processing the data companies have an opportunity to detect specific needs, behaviors, and preferences of each customer and develop customized touch points on their customer journeys and provide a unique path. Customizing customer journeys gives consumers a feeling that they are well-treated and remembered, so it contributed to customer loyalty (VOXX, 2018). Bespoke menswear brand Alton Lane isn't just providing regular shopping, they offer unique features in-store. Walking into their shop a client is immersed into a fitting session, using a 3D body scanner, during which they are served coffee and bourbon accompanied by their custom playlist. The company call its shop "anti-retail" as it is a home also for poker and pool tables. Segment Personalization Report (2017) proposes that customized experiences can raise sales and reflect on customer behaviors. Precisely, it states that 40% of US consumers would purchase a more expensive product if prior they received a personalized treatment. Moreover, Infosys study (2014) witnesses that 86% of people

believe that personalization makes and impact on their shopping. Therefore, personalization helps to establish greater experiences, empower customer loyalty and raise awareness (Voidonicolas, 2020).

6. Meaning

Experiential retail should be meaningful. Buyers have a natural ability to detect and identify with products that correspond to their values. Consumers recognize value for themselves and invest accordingly. Back in the days a store or a company would impose what is good for consumers, attractive, appealing or enjoyable. Nowadays, retailers and companies in general, are shifting to an adaptable mode, responding to the demand for meaning; meanings that are special and cannot easily be replicated on a massive scale by competition. Retailers and manufacturers adjust by innovating and learning, while creativity happens not only in brick-and-mortar stores and e-commerce marketplaces, but also in how different formats correspond to each other and how their consumers perceive value (Palmer, 2019). Top players like Nike, Starbucks and Whole Foods are providing locations and digital implementations to promote the sort of interactions that users would like to have. Meanings, however, should not be given for granted. The development of socio-cultural environment and the proliferation of innovative technologies can fundamentally reinvent meanings (Bellini et al., 2017). Especially the retail industry is closely related to the conditions of socio-cultural context that establishes novel ways of interaction between companies and consumers. Every product on the market, in addition to its functionality and efficiency, holds a meaning that compels people to purchase it. That meaning primarily associates with abstract and emotional conditions. Signs and languages enable goods and services to transmit specific meanings (Verganti, 2006 & 2008; Dell'Era & Verganti, 2007).

VI. Innovation of Meaning

INTRODUCTION

Innovation of meaning (IoM) or Design-Driven innovation (DDI) is a relatively new concept that was introduced by Roberto Verganti (2003) and places new product meaning in the centre of innovating. This theory goes beyond satisfying consumer needs and allows for more radical changes, taking into consideration both tangible and intangible aspects (Verganti, 2008). Moreover, close relation to design is justified by non-linear processes which involve exploration, reflection, and interaction (Jahnke & Hansson, 2010). Before describing the concept in detail, however, it is important to clarify what stands for "meaning" in this case. When "product meaning" term is used it defines a specific purpose of the product for the consumer. Essentially, it is the reason why people use it, neither how they use it (user interface), nor what it is made of (product features) (Baha et al., 2017). Verganti (2008) interprets DDI as *"an innovation where novelty of message and design language is significant and prevalent compared to novelty of functionality and technology."*

In fact, in comparison with more classical approaches that consist of technology-push innovation and market-pull innovation, innovation of meaning introduces a new semantic dimension and dedicates to it higher significance (Fig. 13). Consequently, this dimension considers adding new elements of knowledge to both, technological opportunities of a firm and understanding of customer needs, resulting in *"the knowledge about the signs that can be used to deliver a message to the user and about the socio-cultural context in which the user will give meaning to those signs"* (Verganti, 2003 & 2006). When applying technology-push strategy companies aim to develop new technologies that they then push to the market, while in case of DDI strategy meaning becomes the driving force, which is focused on product languages and messages, according to Verganti. On the other hand, the market dimension of innovation, which entails the analysis of consumer needs, becomes less relevant with the increase of magnitude of innovation. The more radical the innovation, the less useful it becomes to listen to consumers. Consumers tend to be biased and when technologies undergo incremental changes users can showcase their explicit needs, where incremental changes in product meanings are the result of step-by-step evolution of evident customer needs. However, when ground-breaking technologies appear the market is not capable of expressing certain needs that may contribute to new product meanings. Especially because most users make up the late majority and are not ready to take in the

radical changes. Therefore, market-pull approach becomes vulnerable in developing DDI. Contrastingly, a radical change in technology can be used to generate new meaning, making it possible to turn the technology-push strategy into innovation of meaning approach.

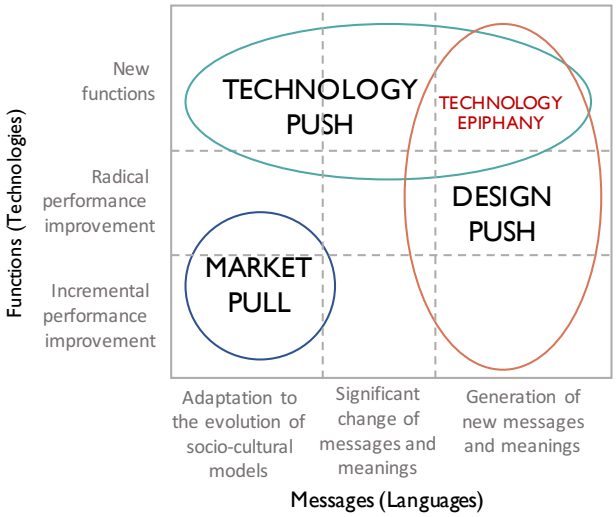

Figure 13. Different approaches to innovation. Sourced from: Verganti, 2003

Nevertheless, meanings are much more context-dependent than technology. And when considering radical changes in meanings they appear to most as unconventional and foreign as they contradict the dominant meaning on the market. Being unfamiliar with them, most established companies struggle to recognize and exploit the value behind these meanings. So, if a company wants to pursue the radical approach and is open to question the old meaning they must stay tuned with the quickly changing socio-cultural context and exploit dynamic capabilities to react to signals in the environment. So, we cannot state that this innovation comes from the consumers or solely from the company, but it is the firm's job to co-generate the new meanings.

DDI does not entail making a product better by improving it features but it means making something that was not there before happen. If we look from the business community point of view, then a company helps a new vision to reach the market and users give meaning to it. In the end, companies do not specify new meanings by themselves they are given by users who are involved into the current socio-cultural context. For this purpose, in Design-Driven innovation, it is crucial to cultivate a great capacity to understand the social environment in which the customer exists, provided that the external cultural traits have a significant impact on the consumer. Since it is quite a complex approach, firms should have

special management established to support the process of innovation of meaning that will help companies to monitor and translate socio-cultural, lifestyle changes to propose new system of values to the consumers. Moreover, DDI is not a closed system and it is known as inside-out process where stakeholder play an important role as well by helping to grasp the new lifestyles and then also to introduce radical innovations.

TECHNOLOGY EPIPHANY

Notably, radical innovations in meaning follow a different process. Indeed, users don't determinately generate new meanings but wait for the radical changes. Simply saying, current socio-cultural conditions and lifestyles, which consumers experience, provoke them to make perceptions that resonate with what is, nowadays, happening around them. Nonetheless, extreme changes in meaning require a much wider vision in order to be perceived as they represent completely new purposes for which product are used for (Dell'Era & Verganti, 2009). Verganti (2009) clearly explains that in every technology it is possible to recognize disruptive meanings that are waiting to get revealed. In addition, in particular cases a certain type of innovation of meaning can be created by exploring opportunities that new, ground-breaking technologies offer. For instance, by capturing the technology's complete value and uncovering hidden interpretations, businesses may reach technology epiphany. "Epiphany" as a term, according to Merriam-Webster Dictionary is translated into *"a manifestation that stands in a superior position; a perception of the essential nature or meaning of something."* In fact, when innovation is generated through a sudden realization of meanings resting in technologies, a technology epiphany appears (Verganti, 2009). To be precise, Verganti offers a two-dimensional approach to technology epiphanies where they get uncovered from a combination of radical technology-push and design-push strategies (Fig. 14). On one hand, the epiphany can be born thanks to company's capability to timely spot a possibility of a radical new meaning about to emerge on the market and, accordingly, to remain open to the technologies that might have been underestimated by its competitors. On the other hand, an alternative scenario may take place: the company is looking for quiescent new meanings that are embedded into a new radical technology.

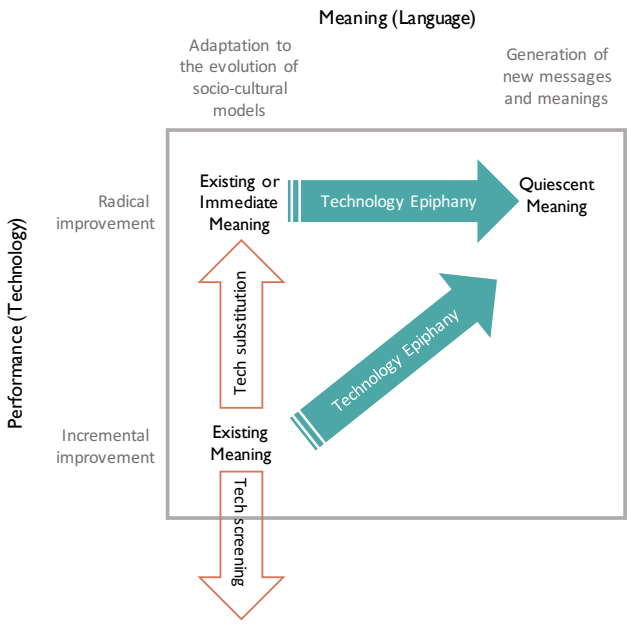

Figure 14. Conceptual framework: technology screening, substitution, and epiphany. Sourced from: Verganti, 2009

A famous example of technology epiphany is Nespresso, which turned out to be not just a new coffee machine. Nestle was aware of the new lifestyles that modern consumers are following: they are fast-paced, living in bid cities, looking for experiences and so on. So, the company decided to turn coffee, a commodity product, into an experience. They created a new meaning for a cup of coffee that enables users to express their identity through the flavour they choose in an easy and elegant way. Certainly, this would not be possible without a completely innovative coffee machine which works with one-cup colorful capsules. In addition, not only the change of meaning happened in the product, but also in the service. Indeed, Nespresso chose a D2C strategy where it operates thought Nespresso Boutiques located on the busiest streets of cities. Becoming a premium product, the retail locations give visitors a feeling of becoming coffee experts as they are able to learn about coffee through conversation from specialized advisors, exclusive events, and coffee tastings.

PROCESS OF DDI

In order to go through the process of DDI we should relate to the book by Verganti called “Design-Driven innovation” (2009) which in detail describes every step. Most importantly, the process includes three consecutive steps: listening, interpreting, and addressing. Each of them entices certain actions and actors, however, all of them require

the following assets: knowledge of how people could give meanings to things and the seductive power to influence the emergence of a radical new meaning (Verganti, 2019).

1. The first listening stage involves as internal team of design, as a group of external interpreters of design discourse. The externals are chosen to be experts of a specific life context in which certain product is used and internal team is identified and qualified to cooperate with them to redefine the context and detect a visible change of meaning of the product. In his latest book "Overcrowded" Verganti states that *"first, we saw that innovation of meaning has to start from us. The process therefore is structured along a sequence of steps of which the first is to ask individuals to expose their preliminary hypotheses. The process then opens up progressively to criticism from others. Initially within our own organization...subsequently, we can receive criticism from outside our organization."* Essentially, opening up the knowledge about possible product meanings and languages is performed at this step (Acholkar, 2017). The company is entitled to uncover where the knowledge is held and understand how to internalize it.
2. Then, at the second step of interpretation the internal team committed to DDI needs to merge the results derived from the listening stage with firms' available resources, tangible and intangible, so that potential cutting-edge concepts are explored. Creating a new vision and working on ideas for alternative meanings and languages is the core of interpretation. In order to propose breakthrough innovations, it involves both, redefining collected data and expanding on research and experimentation.
3. Lastly, during the addressing part, outsiders to the company rejoin the process where they assist in communicating the firm's vision in a way that the new offerings powered by new meanings become successful among consumers with the help of language and expressions. In complex, the new vision is translated to various interpreters while identifying the most suitable approaches though which the proposals are considered and incorporated.

The above three steps work together to ensure advantaged access to external resources: company's knowledge and its seductive power (Verganti, 2009). The advantageous term refers to the fact that the discussion with the participants of the design community is stronger and more thorough than that between rivals and could therefore be

characterized as competitive advantage. (Sigolotto, 2010) This ensures that the firm can create a special and unique connection with players of the design discourse. In addition, developing DDI does not require exchanging information with interpreters, but rather it is a collaborative process that involves generating new meanings. The core capability is, therefore, to engage in the design debate, to critically interpret input coming from outsiders involved and to create an alternative and revolutionary perspective.

There are a few factors which witness why this methodology is different from the traditional user-centric model. So first, it involves an in-depth design and action process of development and sharing knowledge instead of simply brainstorming combined with chaotic actions. Next, it requires involvement rather than following from internal and external actors. As the process goes from inside to outside the criticism rises and becomes more intense, therefore, creating clashing and fusing periods leading to more profound visions. The goal is to identify new concepts and languages rather than just analyze the current context. Finally, the approach is focused on the capacity to create an external and internal set of connections.

The original process is well-developed and clear, however, in most cases is referred to products rather than services. Therefore, some author tried to fill in the gap and proposed a specific method named Design-Driven Service Innovation (DDSI) which stands for additional techniques to DDI used in service design rather than product design with the aim of changing the meaning of a service for its radical innovation (Takeyama et al., 2016). The approach consists of three tactics that support the practices of the first two phases (listening and interpreting) of the DDI used in the service design process. The emphasis of researchers on these steps is due to them primarily dealing with creating of a new proposal, while the third stage is mostly related to communication of the proposal. The first DDSI method is called Contextual Reframing. Contextual Reframing is used in the listening phase to deliberately redefine a cultural context where the service is used into another relevant socio-cultural context to promote discussion between main interpreters. The second method is named Structural Interpreting, which is used at the step of interpretation to recognize the unique view of the key interpreter and to establish a vision for the concept of the new meaning of the service. The third technique, Contextual Blending, evolves the concept by implementing the main context where the established service is being used into some evidently remote settings where users already recognize the essence of the interpreters' vision (Takeyama et al., 2016).

VII. Research Methodology

After getting to know the main two topics of this work, physical retail and innovation of meaning, this chapter serves to explain the research process and methods chosen. It outlines research framework, including the process and methods, focuses on case study analysis, and highlights notable limitations. From methodological point of view, the work is clearly divided by two approaches, consisting of secondary data research and analysis of formed case studies, which makes it predominantly a theoretical study. However, after the analysis of both streams of information practical guidelines in a form of a framework for companies are developed. Correspondingly, firstly, theoretical methods will be observed and then limitations of the overall work will be presented.

RESEARCH FRAMEWORK

From the beginning of the process it is noticeable that secondary research and case study analysis were done in close relation to each other. To be precise, they were carried out in a manner similar to double diamond design process model, following convergence and divergence phases (Fig. 15). Consequently, similar patterns are revealed among collected information and then the output is formulated with the help of clustering, generalization, and strategy theory models.

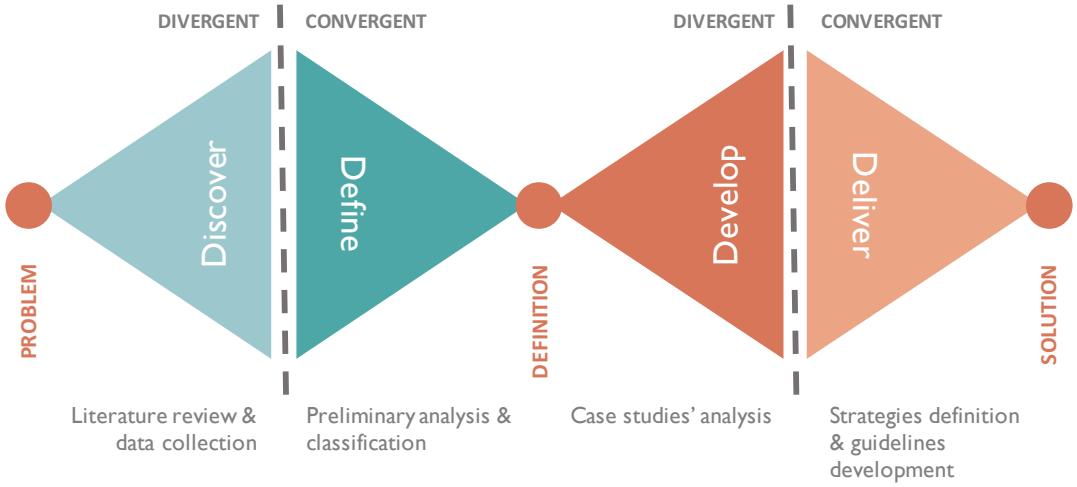

Figure 15. Research process following double diamond design process

Even though both streams of data are of equal importance and were obtained and documented almost in parallel, the research started from defining possible contenders for the list of cases of technology epiphanies in physical retail. In this way, secondary sources were used not only to observe the phenomenon, but also to build a selection of real company

cases. By retrieving data from journals, industry ratings, interviews, company web-sites and reports, social media, recordings of conferences etc. necessary information were obtained to form the sample. Apart from desk research, some information was derived also from one-to-one conversations with company employees as well as store visits in the UK and Italy to capture real-life customer experience. Inside the stores it was important to observe natural behaviors of visitors from the moment of entrance to the moment of leaving the location, including the interactions they faced within the environment. To collect the information in a systematic way, most important identifiers were applied to each store:

- Name;
- Industry;
- Number of stores;
- Geographical regions where stores are present;
- Innovation type.

It is noteworthy to mention, that in contrast with other identifiers innovation type was not defined on the spot and could have been alternated with the progression of the research due to the increasing theoretical knowledge and continuous review of the cases.

As for literature review, it was enriched with various materials and sources to order to provide a clear understanding of innovations in retail. Firstly, literature on innovation theories, Design-Driven Innovation, and innovation of meaning was studies in order to understand technology epiphanies. While classic strategies of innovation were worked mostly through academic context, DDI and IoM have been analyzed with the help of books written by Roberto Verganti “Design-Driven Innovation” and “Overcrowded: Designing Meaningful Products in a World Awash with Ideas”. These books comprised the basis of the research and gave ideas for several case studies to include in the analysis.

As mentioned before, the research was powered by secondary sources investigation, especially literature review, which helped to evaluate the amount of information available and discussions taking places on the topic as well as in related fields. Regarding the work method, published literature was identified from scientific literature portals, university sites and databases, as well as company reports, business journals and analytics agency reports which were investigated and grouped according to the topics. Literature review was also fundamental in the process of formulating the research problem and supporting the primary contribution of the research. Additionally, with the help of literature review the foundation for

the development of a reference model was laid out, the analyses of physical retail case studies together with their comparison were enabled as well as the final output and practical business implications were revealed. In summary, the process was intuitively directed by the alternating stages of convergence and divergence.

CASE STUDY ANALYSIS

Apart from literature review, a large amount of workload was concentrated on the second part of the analysis which entailed identification and investigation of case studies. As for stores selection, they were picked from various resources, such as reports by Global Retail Trends & Innovations, Deloitte, and Retail Insider; Retail Innovation rewards nominees; ratings of the most innovative retailers by Insider Trends, Fast Company, Forbes; articles by Forbes, Business Insider, and Harvard Business Review etc. Not all shops from the sources made the final list as not all of them involved new technologies or generation of new meanings which is the focus of this work. In order to reach the best results, firstly, a general guideline was created upon which each case was structured. The cases format was inspired by Ebeltoft Group which since 2005 has been presenting annual report on Global Retail Trends & Innovations, focusing on current trends and the most impactful retail cases around the world. In detail, country of origin is highlighted in their case studies which allows to get insights of local markets. In addition, industry and size identifiers were suggested by an adaptation of Rogers Innovation Diffusion Theory (Pantano & Vanucci, 2019) to get a broader picture of innovativeness. Finally, stores were analyzed from innovation strategy perspective: elements of technological innovation and innovation of meaning, if present, were described.

In order to classify the cases by innovativeness two dimensions, technology and meaning, proposed positioning of the stores on a matrix. Going further, the analysis proceeded in parallel to describe overall findings relevant to all cases and to work on the clusters, differentiating them based on specific characteristics and using theoretical models. This approach allowed to define the main strategies companies followed and to formulate a framework for firms to apply if they want to develop the concept.

LIMITATIONS

Naturally, the research has its limitations which must be addressed to avoid misunderstandings of the attempt and the content. Actually, one of the most visible limits lays in the amount of case studies included in the research. In fact, over 25 stores were considered and gave enough room to reach the aim of the research. However, the range is not complete due to time and information constraints and certainly a much higher number of locations must be investigated to derive more representative results. In addition, with the number of cases being quite low an opportunity to perform statistical data analysis was rejected which could be an opportunity for further development. Moreover, only several stores were visited in person while the majority was considered exclusively from secondary research and opinions due to their international nature which put constraints on the depth of consumer experience analysis.

While carrying out the analysis of the cases, another limit could be mentioned as not every characteristic of the stores was presented, focusing on the most visible ones, because of the lack of data or time constraints which were then used to identify companies' strategies. It is true that other characteristics provided additional strategies could be distinguished, however, for this research the most relevant ones were mentioned.

On the other hand, certain limitations applied when looking into technology epiphany theory as it is still quite a young concept and not a lot of literature is available as, for example, on innovation, in general. Although the author of the theory provides a detailed study and it gives an opportunity to deeply address the matter, there is a lack of secondary opinion on the concept which could be helpful in this work. In addition, the concept is mainly applied to product innovation, while retail faces innovation of services, so application of the theory had to be partially adjusted.

VIII. Case Descriptions

Amazon.com

Amazon Go

General Description

KEY INFORMATION

Country: the USA

Industry: Convenience goods

Number of stores: 26

Innovation of technology: combination of IoT technologies

Website:

The retail industry has been trying to find a solution to the greatest inconvenience of grocery shopping, lines at the checkout, for a long time. Models like online shops, or in-store pick up option, or home delivery after paying at the cashier provided by supermarkets have been proposed by various retail chains. However, no one thought about a radically different strategy – making checkouts disappear completely from the supermarket. Amazon, which has been doing everything differently from traditional retailers since the beginning, created Amazon Go concept - new checkout-free convenience store, providing an original shopping experience to consumers since early 2018. Amazon initially welcomed its employees in its home city Seattle in 2016 at Amazon Go first location and in January 2018 launched the store for the general public. Last year, eight new stores opened, including three more in Seattle, two in San Francisco and three in Chicago. Amazon announced that it has been planning to open 3000 Amazon Go stores by 2021 and has been hoping to bring the idea to the UK, airports, and universities. Most locations span from 1200 to 2 300 square meters, though Amazon is exploring multiple formats: 42 square meters store located inside their office building in Seattle is the smaller store to date. What Amazon is doing is creating challenge for traditional retail in the U.S. food industry worth $800 billion. The technology giant acquired Whole Foods in 2017 to outdo Walmart, Target, Kroger and others brick-and-mortar chains. Such firms have responded to Amazon's digital efforts by developing grocery shopping and delivery online options. Evidently, Amazon reported $4.4 billion sales last quarter of 2019 in its physical stores category that included Whole Foods and Amazon Go locations. Additionally, Amazon reportedly forecasts annual revenue from all Amazon Go

stores would go up from $28 million in 2018 to $639 million in 2020, according to The Information news portal.

Amazon managers, experts, media outlets, and ordinary consumers seem to be so impressed by the second to none technologies used by the company that the most attention is clearly focused on the technical side of the concept. It is undoubtedly true that Amazon Go deals with ordinary frustrations of shoppers but what makes it so revolutionary is the new meaning behind visiting the physical store. In its core the reason for stopping by Amazon Go instead of CVS is the value of time. Being one of the most valuable resources time saving is a quest that modern consumers have to walk through every day. And if there is a solution out there that will allow for decreasing lunch time from an hour to 30 minutes or arriving home 15 minutes earlier after work they will take it. So, customers visit Amazon Go to save time in their day rather than fulfilling their weekly shop. *"The number one problem for people is time poverty."* said Dilip Kumar, vice president of technology for Amazon Go, while standing in the store during its grand public opening. "People want good food fast, and they want it to be convenient." (Bhattarai & Harwell, 2018)

Why Is It Innovative?

Innovation of Technology

Amazon spent around 6 years developing and trying technologies for Amazon Go before settling on the final combination of computer vision, sensor fusion, and machine learning to track products that shoppers purchase. The items being picked up from the shelf are added to a virtual cart, and the virtual bill is subsequently generated. This gives customers an opportunity to literally take what they want from the shelves and "Just Walk Out" – being also the name given to the technology (Waldron, 2018). Going into detail "Just Walk Out" technology is a combination of various technological innovations that are needed in combination:

- **Person tracking:** Continuously identifies and follows each person inside the shop, from the moment they walk in until they walk out.

- **Sensor Fusion**: Aggregates signals across different sensors that increases accuracy of the results.

- **Calibration**: Every camera must know precisely its location in the store.

- **Item Recognition**: Distinguishes the different items picked up from shelves, carried around, and being sold through RFID sensors.

- **Pose estimation**: Cameras must detect what each person standing close to a shelf is doing with their arms.

- **Activity Analysis**: Understands what people do with the items picked up.

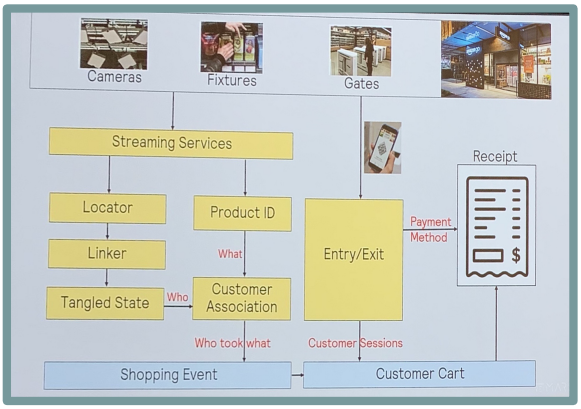

Figure 17. Amazon GO technologies

Figure 16. Amazon Go

Alibaba

Hema Store

General Description

Alibaba's new offline store, Hema, is quickly spreading across China. Over the past year, the company has expanded their brick-and-mortar retail space to 87 locations. And while it may sound like a deviation from the tech origins of Alibaba, the store is built around cutting edge technologies (Saiidi, 2018). Using Hema's smartphone app, consumers check barcodes in the shop to learn information about items like product description, origin, quality certificates, and cooking suggestions. Alibaba gathers all data concerning what a customer has ordered, and it gives consumers the possibility to buy the same items in an atomized way that are also shipped to their home. Stores aslo act as distribution centres, where delegated workers move around loading bags with Internet orders, and then put them on a conveyor belt to the delivery area. Usually clients within a 3-km range will get their grocery orders within half hour, Alibaba said. This suggests that consumers may buy dinner from their office before going home and have it on their porch before they return. Each Hema store comes with dining areas for hungry shoppers, however, some of them accommodate completely atomized robot restaurants, Robot.he. Access is easy: scan with a phone to get a table, go to that table, scan another QR code at the bottom of that table, and access the complete restaurant menu. The order is placed instantly from the web page, including fresh produce cooked from the store.

KEY INFORMATION

Country: China

Industry: Food

Number of stores: 87

Innovation of technology: combination of AI technologies

Website:

Even though Hema is first and foremost a grocery store, it is one of a kind due to the attention and effort paid to fitting local needs throug AI technologies. This way, regular shoppers know that they surely find their favourite items on the shelves or even

automatically get their weekly groceries delivered to their doorstep. If Amazon Go enables to save time, Hema also offers buildable trust. People trust Hema with their shopping because they know that their habits and wishes are taken into account in an efficient manner. Moreover, It presents a completely new business model, where a store is combined with a fully functioning logistics centre and a restaurant.

Why Is It Innovative?

Innovation of Technology

Hema's AI technology concentrates on optimizing customer engagement and retailers' performance, seamlessly blending online and offline shopping. Hema effectively used machine learning methods that aim to detect patterns in measured data, construct models that describe related trends and make relevant conclusions. Incorporating technology in this way the organization is able to grasp demand fluctuations for each product category by consumers, which allows for more reliable supply chain management. AI systems helps accurately adapt various factors to suit consumer preferences, including items details, order specifications, traffic information, climate conditions and allocation of delivery personnel. Technology deployment means that the range of products and services will adapted specifically to local consumers. Traditional retailers offer almost the same selection at all outlets, while Hema gets access to big data insights to guarantee that product range is targeted towards the needs of the neighborhood.

Figure 18. Hema store business model

Alibaba & Ford Motor Group

Super Test-Drive Centre

General Description

KEY INFORMATION

Country: China

Industry: Automotive

Number of stores: I

Innovation of technology: combination of online & offline technologies

Website:

Tmall and Ford opened a Super Test-Drive Centre in Guangzhou, China, where drivers can select among 100 Ford brands' vehicles available for purchase (Joseph-Grant, 2018). Anyone who has Alibaba account just needs to log in the Tmall or Taobao smartphone app, select a car, and pick it up from the vending machine. In total the process takes no longer than 10 minutes and users can choose from such cars as Ford, Jaguar or even luxurious Aston Martin, and then experience a three-day test drive until they determine whether they want to purchase it or not. In case they don't enjoy the car they first picked or want to try other options, they may choose another one, up to a maximum of two. On the other hand, if they would like to buy that car a deposit must be put down through the Tmall app and the remaining sum is paid at one of Ford's showrooms. A general manager of Tmall Auto, Gu Wanguo, believes that this solution makes a great impact on the company's retail strategy. According to him, Super Test-Drive service, combining data science and technology, will help better suit customer needs. Car Vending Machine is designed to let people experience different models and brands of the company in real life without any restriction. Moreover, the service is completely automatic and eliminates such activities that can be quite annoying as visiting a leadership, talking to a salesperson or signing documents.

Why Is It Innovative?

Innovation of Technology

The entire transaction is designed to be handled online, without any human interaction. First, when a person sees an attractive car on the street, he or she likes takes a picture of it using the Taobao app. Then to schedule a test drive, people can simply add essential information and take a selfie even though to test-drive a car, Alibaba app users will need to have 700 Alibaba's credit score rating. Once at the large vending machine-like garage, the customer then has their face scanned using Alibaba's facial recognition technology before collecting the dispensed vehicle (Fig. 20).

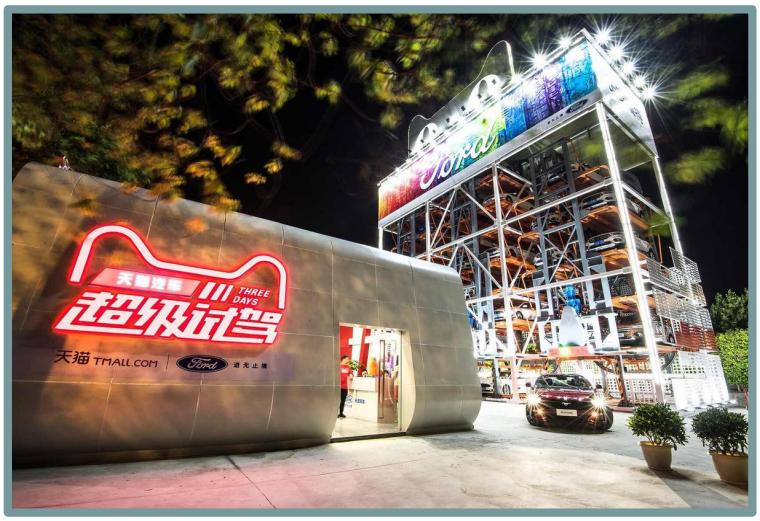

Figure 19. car vending machine

Figure 20. Alibaba facial recognition

Natuzzi

Natuzzi Augmented Store

General Description

Natuzzi innovates with the brand experience and opens the first Augmented Store in New York: a new retail environment featuring a revolutionary mix of technology innovations such as Virtual and Augmented Reality, Holographic projection, advanced 3D modeling and interactive product configuration tool live together in the store to deliver an innovative and entertaining shopping experience (Natuzzi, 2019). This initiative is launched in partnership with Microsoft and Hevolus Innovation, who have developed a creative consumer experience capable of increasing the conversion rate, reducing purchasing time and fixed costs of inventory.

KEY INFORMATION

Country: the UK & the USA

Industry: Interior Design

Number of stores: 2

Innovation of technology: Combination of AI technologies

Website:

The goal is to establish emotional connection through a theatre-like experience that relates to the brand. What Natuzzi tries to achieve is engaging customers completely into a new reality, where everything is possible and the only limit is their imagination. By integrating the showroom space with the AR technologies, the brand creates a truly seamless experience which is fully customizable according to users' preferences.

Why Is It Innovative?

Innovation of Technology

- Thanks to Mixed Reality, the company can show the entire selection of products without renting large costly showrooms. Microsoft HoloLens 2 allows visitors to see the holograms of the products in miniature and walk around them to inspect all the details.
- When using augmented headsets (Fig. 21), visitors place themselves in a virtual showroom (Fig. 22), a digital space with objects displayed in 1:1 scale, where they can experience brand's interior pieces as if they were in real life but with an option to instantly change color or material.
- Natuzzi Augmented Store can also be used for customized projects. Clients may come to the retailer and develop a design projected on top of their physical space and then make it come to life with the help of both technologies: HoloProject in miniature and interactive version and Mixed Reality Project on real-scale projection version.

Figure 21. Natuzzi augmented headsets

Figure 22. Natuzzi virtual showroom

Audi

Audi Innovation Space

General Description

KEY INFORMATION

Country: China

Industry: Automotive

Number of stores: I

Innovation of technology: VR technologies

Website:

First of its kind, inside Festival Walk shopping centre in Hong Kong, Audi Innovation space is an original concept store that persuades visitors to get involved into a retail experience powered by digital innovation, demonstrating brand's ability to answer to the evolving business conditions (Fig. 23). Consumers are accompanied by Audi employees into an architecturally perfect designer space, where they get acquainted with new car model concepts, including electric and autonomous vehicle technologies. Moreover, using innovative VR experience goggles, visitors are welcomed to completely personalize a model of their choice, selecting between various body colors, as well as exterior and interior changes. After getting a 360 view of their creation they can virtually drive the car in a preferred location.

Through the VR headset, users can fully customize their favorite car and learn about the smallest specifics in practice, choosing among several hundred million available versions and component variations. The VR program helps users to completely immerse themselves in the the world of Audi.

Why Is It Innovative?

Innovation of Technology

- Use Oculus Rift headsets (Fig. 24) is an interactive simulation equipment capable of remotely taking people to other settings. Using it customers are enabled to explore and design a wide range of Audi vehicles while enjoying the feeling of being within one of the models. When the user picks up a headset, a special camera monitoring their gestures adjusts the image to their focal point.
- Customization software will then become activated, helping them to modify certain internal features, including fabrics, leathers, moldings as well as the entertainment interface.
- Improving sensory interaction through specially designed sound accessories, the Bang & Olufsen headphones imitate specific acoustic details of a car, such as closing of the doors or the 14-speaker set of the Audio A8.

Figure 23. Audi innovation space

Figure 24. Oculus Rift headset

Uniqlo

UMOOD

General Description

UMOOD was created together with a neuroscience research group to raise awareness of UNIQLO in Australia as it just entered the Australian market by positioning UNIQLO as a multinational fashion innovator and a T-shirt house. But with such a wide variety of T-shirts and over 600 popular designs to choose from, it was crucial not to confuse shoppers with so many options. The brand wanted to turn the casual T-shirt into something fun, making it easier for people to choose the right model.

KEY INFORMATION

Country: Australia

Industry: apparel

Number of stores: 4

Innovation of technology: Biomarketing technologies

Website:

Why Is It Innovative?

Innovation of Technology

UMOOD is basically an in-store sensory device that recognizes customer's emotions and selects t-shirts that match their attitude perfectly. Clients are equipped with a neuro-headset that read their brain activity when observing a sequence of stimuli (Fig. 26). Their neuronal reactions to each video are analyzed using a specially built software to classify their current mood and suggest a suitable T-shirt. The technology algorithm therefore uses five metrics: interest, excitement, focus, anxiety, and sleepiness, — to measure the person's reaction to the videos and to attempt to better suit the design with the user's mood.

Starting as a temporary activation, the concept was so successful that consumers were coming to the stores to use UMOOD and find out what is their perfect t-shirt design (Fig. 25). What attractd them was an ability to discover which clothing items suited their

mood, what their brain positively responded to. Acutally Umood debuted a neuroscience approach to shopping, which can fundamentally change how people shop in the future: from buying what they think they want to what really can make them feel better. However, as of now UMOOD remains a single marketing initiative not well integrated into the store envirnment and the overall concept. Summarizing, this technology has great potential but needs to become a part of the company's retail strategy to give a new meaning.

Figure 25. UMOOD station

Figure 26. UMOOD experience

Iris Nova

The Drug Store

General Description

KEY INFORMATION

Country: the USA

Industry: Soft drinks

Number of stores: 2

Innovation of technology: RFID technologies

Website:

Dirty Lemon is Iris Nova's primary brand that sells lemon water with active ingredients, such as charcoal, collagen, turmeric and others for a quite premium price. Iris Nova offers the bottled water and smoothies in two "conceptual retail experiences" in Tribeca and Hudson Yards in New York, while the next shop openings are to be launched in California. Moreover, the concept is going to be replicated in one of the large US retailers. The core of the business model is in a unique payment system and trusting relationships that are, therefore, cultivated between the brand and its consumers. In short, the Drug Store operates through text-to-order concept, where products are purchased with the help of texts in consumers' smartphones. The store is equipped with three refrigerators full of refreshing beverages. It's extremely easy to pick one up: just open the door, take a drink of their choice and leave (Fig. 27). No cashier, no lines to wait in. In order to complete the order customers just need to send a text to the company, indicating the chosen product and follow a payment link. There is no application to download, niether a website to access for the payment, making the experience extremely fast and carefree.

"They want to actually be kind of immersed in a brand, and take it all in, and maybe take a picture," the CEO of Iris Nova mentioned. The choice of the communication channel with the consumers was made due to the target audience's characteristics: by selling through messaging the company relates more to millennials who want to shop as they go and have a large portion of their lives inside smartphones. Focusing on SMS, meant focusing on relationships. Grab and go concept in its meaning is similar to Amazon Go stores because the primary reason behind consumers choosing the store over others is

saving time. Even though in comparison with Amazon Iris Nova targets a niche premium market with less sophisticated technologies, the simple retail model works counting already over 100000 customers.

Why Is It Innovative?

Innovation of Technology

Partnering with Avery Dennison, each bottle inside the fridge was marked with a unique RFID tag that tracks the shelves (Fig. 28). This technology id the foundation of the service as it allows for the seamless shopping experience and helps further engagement with the consumers. The fridges' current fulfillment situation is constantly monitored, so that the company can restock the locations on-demand and study in detail customer preferences that will help in future product development. Additionally, RFID technology gave each bottle a unique digital identity that customers can discover directly inside the store when scanning it under an interactive screen. Suddenly, product information will pop up, including ingredients, nutritional value, origin etc. Finally, the system will automatically register when the bottle leaves the refrigerator and, consequently, the store and adjust inventory information.

Figure 29. The Drug Store experience

Figure 28. The Drug Store

Apple Store

General Description

KEY INFORMATION

Country: worldwide

Industry: Personal Electronics

Number of stores: 500+

Innovation of meaning: Community hub

Website:

Every month huge numbers of people walk into Apple Stores to play with some of the newest technological devices and computer appliances that the tech world has to offer. From Apple Watches to iPhones to MacBooks – these products are known to everyone, and every trip to a shop is already treated as an experience, however, the renovated Apple Stores are designed to be a hybrid between a retailer and an educational centre, put together in a glass box that resembles anything but a conventional store. Developing the town square concept Today at Apple was introduced, a program released in May, 2017 that provides immersive courses in retail locations around the world. Globally, over 16000 educational events are held regularly in more than 500 Apple stores including a range of fields from video and drawing trips, music workshops to children's activities and programming classes (Fig. 30). Consequently, the offer just keeps growing. The collective element of Apple's new stores is key. The new locations also offer coding lessons–named "Hour of Code" seminars–for youth, introducing Apple's programming language, Swift, as well as working spaces which can be used by entrepreneurial and industry guests to connect and share their ideas. The shops also organize "Teacher Tuesdays," intended to help train working teachers about how to properly implement technology into their schools.

Why Is It Innovative?

Innovation of Meaning

The aim is to create interactive discussion environments inside the retail locations. In fact, Apple is radically changing its stores branding – it tries to avoid the word "Store" from the descriptions of its current retail spots. "Apple Store, Valley Fair" unexpectedly became just "Apple Valley Fair" on its homepage, as did "Apple The Grove" and "Apple Union Square." (Fig. 31) It is a step that clearly transmits that Apple does not want its consumers to think of the shops as simply stores and one of the means to do so is to prevent from using the actual word. That is the perception that is being promoted and this is Apple experience.

Figure 31. Workshop at Apple Store

Figure 30. Apple Milano

Huawei

Huawei Global Flagship Store

General Description

KEY INFORMATION

Country: China & France

Industry: consumer electronics

Number of stores: 2

Innovation of meaning: Community hub

Website:

Following the brand's key slogan, "Make it possible," Huawei built an interaction centre where, apart from experiencing the brand's novelties, consumers can enjoy their free time, such as taking classes, seeking digital race partners, explaining programming to their children and so on. The global flagship is the first retail space of Huawei that acts as a gathering spot where design, technology and modern culture converge and transform into Huawei's city centre to attract customers (Fig. 32, Fig. 33). Consumers have an opportunity to relax and enjoy their friends, as well as take part in free classes hosted by the Huawei Community, which addresses different areas such as music, video, sports and health care (Huawei, 2019). In March, 2020, 6 months after the Chinese location, the second flagship store opened in central Paris.

Why Is It Innovative?

Innovation of Meaning

In order to deliver to visitors an original experience, the store is designed with an Intelligent Environmental Management System inserted inside the building, developed with Huawei's Hilink technology, which can instantly change the light, temperature, and humidity of the space so that all customers can find comfort in any part of the shop. Moreover, the store has obtained 5G network coverage across the entire building. Customers will

witness the coming 5G revolution first through 5G speed, cloud gameplay and other technology initiatives.

Innovation of Meaning

"We are no longer calling it a retail store, but a community square. This is a common community of Huawei users. They are closely connected. Consumers come here to visit, learn about the most advanced technology and design, learn to create or Meet friends." Zhu Yonggang, CMO of Huawei's consumer business, stated. Even from the CMO's statement it is clear that the company took inspiration from Apple Stores, implying a town square concept. Therefore, keeping up with its competitor Huawei draws consumers in with free working spaces, occasional lectures, classes of interest and elements of gaming. Being constructed almost completely out of glass walls the store truly blends in with the city background and does resemble a square, where pedestrians can casually come by, try new products and work on their computers. What it probably lacks is the uniqueness and the brand identity as laying Apple's concept over another brand without differentiating makes it underperform in comparison with the original concept.

Figure 33. Huawei flagship store

Figure 32.inside of Huawei flagship store

Starbucks

Starbucks Reserve Roastery

General Description

KEY INFORMATION

Country: the USA, Italy, China, Japan

Industry: Coffee

Number of stores: 6

Innovation of meaning: Discover coffee

Website:

Customers usually spend four times more at the Starbucks Roastery shops than at a conventional location, according to a corporate representative. It becomes obvious why while seeing the Roastery — the place has a vast variety of food and coffee choices, lots of places to relax and socialize for a while. What is the purpose behind the Roastery concept for the consumer? Roastery is an opportunity to explore the world's greatest and the rarest coffees. Starbucks wants to share a journey with customers, starting from green coffee beans in order to tell visitors the insights of what happens when a bean is processed and then serve the freshest coffee that can be prepared applying different methods. Starbucks Innovation Centres and Tasting Rooms are located inside. Generally, the company turns their coffee shops into coffee hubs where consumers can discover, experience, interact etc. The Reserve stores are a gateway to evolving customer habits and a platform to explore innovative ideas and products, while at the same time continuing the growth of the brand into a luxury lifestyle market that stretches much further than coffee to apparel, prepared foods, and a networking spot. Not only the company introduced a new concept, but also it transitioned from standardization to personalization. The new approach is to make Roasteries blend in as much as possible into the local context by filling the space with the help of local architects and artists and collaborating with local coffee suppliers (Fig. 34, Fig. 35). One of the latest stores can be found in Shanghai where the coffee arrives from China's Yunnan Province and is roasted on the spot by eight professional Chinese coffee roasters (Fig. 34). The wooden coffee bars are handmade by top Chinese craftsmen and correspond to the specific roasting curve of coffee beans. The bars also act as the scene where

hundreds of baristas use one of six brewing processes to prepare some of the world's rarest coffee drinks. The Shanghai Roastery effortlessly combines a real-time, in-store and online user experience.

Why Is It Innovative?

Innovation of Meaning

Roastery visitors are welcomed to immerse themselves in the first Starbucks Augmented Reality (AR) interaction–available via the custom-designed Roastery interactive web-app or Alibaba's Taobao app by simply indicating their mobile devices at key objects around the Roastery to give life to the Starbucks bean-to-cup story. The Roastery platform also includes an interactive menu to help consumers create their individual Roastery exploration journeys, which can intuitively exchange coffee bar information, brewing processes, as well as other exclusive physical and digital experiences through AR innovation. Customers unlock virtual badges every step of the way and after all badges have been obtained they earn a personalized Roastery filter to celebrate the experience and post on social media. The digital experience is developed by Starbucks in collaboration with Alibaba Group. *"The Starbucks Reserve Roastery is one example of how we amplify the brand with the ultimate experience around all things coffee,"* CEO Kevin Johnson said at Investor Day Thursday. It also draws on the omnichannel approach with Roastery staff members with iPads on hand to check out guests along with conventional cash registers providing even more convenient and relaxing experience.

Figure 34. Starbucks Reserve in China

Figure 35. Starbucks Reserve in Japan

Nestlé

Nespresso Boutique

General Description

Nespresso was established over 30 years ago on a clear and innovative concept – to encourage anybody to brew a perfect cup of coffee, just like a professional barista. With a single click of a button, people can enjoy fresh, delicious espresso, with every cup. It consistently continues to offer the highest level of customer service, including the delivery of tailored experience, the adoption of innovative retail formats, the increase in efficiency, and even better access to skilled coffee experts. By cultivating close relations with customers, the company can predict and adjust to their desires and expectations in terms of selection, accessibility and service. Nespresso is dedicated to innovation and delivering the best coffee centered experience.

KEY INFORMATION

Country: worldwide

Industry: coffee

Number of stores: 700

Innovation of meaning:
Discover coffee

Website:

Why Is It Innovative?

Innovation of Meaning

Answering to the consumer's demand for a more integrated personal retail experience, boutiques are exploiting new devices with Nespresso Coffee Specialists who now carry portable tablets. Coffee experts use the gadgets to insert customer orders. The required products are quickly packed at the back of the store, waiting for the client to pick them up. *Nespresso* Coffee Specialists become personal coffee advisors, who share their expertise, recommend Grands Crus and guide customers through the coffee

experience from start to finish (Fig. 36). Coffee Experts are professional coffee consultants who share their knowledge, discuss the selection and lead consumers through the coffee process from beginning to the end. One of the latest developments throughout Nespresso boutiques in the last years has been the launch of self-service areas with automatic checkout featuring RFID technology and pick-up stations where time saving customers can receive items ordered online.

Customers will leave the Nespresso boutiques thinking they've learned something new about their coffee— the flavor, the origin, and the consistency. This idea is accomplished with the help of coffee tastings and masterclasses, and through the exquisite manner in which the story behind the chosen blends of coffee is presented. Entering in the Boutiques does not feel like a typical coffee shop: it is a luxurious and well-designed space with a tasting station in the middle of it (Fig. 37). Surely this positioning is intentional as Nespresso wants consumers to discover different flavors and initiate discussions around coffee at a roundtable. The more time is spent inside the store, the better because emotional connection with the brand is created and the relationship is established. By later inviting its loyal customers to join masterclasses in the Boutiques the brand draws attention to its physical locations. Additionally, it wants to build a community around Nespresso coffee and the stores become places of reunion.

Figure 37. Nespresso coffee specialist

Figure 36. Nespresso boutique

Lexus

INTERSECT BY LEXUS

General Description

KEY INFORMATION

Country: the USA, Japan, UAE

Industry: Automotive

Number of stores: 3

Innovation of meaning: luxury community

Website:

Can an automotive company open a genuine high quality restaurant? It seems so, considering Lexus' latest INTERSECT — open now at 3 cities around the world and delivering bespoke luxury dining experiences. Lexus mixed excellent taste and imagination with people who are incredibly skilled at what they do, as other artistic undertakings. Based on the popularity of two prior INTERSECT activations in Tokyo and Dubai, New York City's newest release perfectly corresponds to the artistic spirit surrounding it. Each INTERSECT facilitates a cultural exchange around luxury. Although the key attraction may be the restaurant, the café, or the cocktail lounge, the iconic public gallery's artistic programming is a part of every experience, so the idea hardly evolves just around dining (Fig. 38). A new exhibition is carried out every 3 months, ranging from photography to sculpture to interactive installations (Fig. 39). In addition, Lexus holds events where talented speakers are invited to host conferences, lectures, and so on.

Why Is It Innovative?

Innovation of Meaning

INTERSECT is essentially a luxurious place for visitors to relax, think, create, discuss, and share ideas where empowered people intersect with different aspects of life, from fashion and design to food and relaxation, tech and beyond. It is a gathering spot for creative

people to unite and create relations which make even better ideas. It's an inspiring place to stay. INTERSECT BY LEXUS is a sensorial experience that mirrors the nature and culture of the brand's environment (Lexus, 2020).

Figure 38. INTERSECT by Lexus restaurant

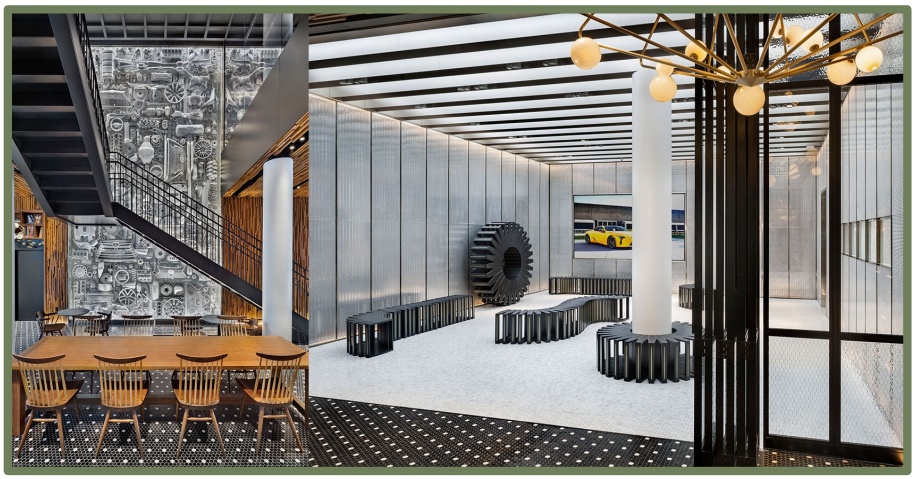

Figure 39. INTERSECT by Lexus art exhibition

Zwilling

Zwilling Cooking Studio

General Description

KEY INFORMATION

Country: China & the USA

Industry: kitchenware

Number of stores: 2

Innovation of meaning: Cooking school

Website:

The Zwilling Shanghai flagship store was awarded as one of the world's top three retail space designs in the annual EuroShop RetailDesign Awards (RLI, 2019). The store blends retailing with cooking classes and a restaurant, with a focus a on traditional western and eastern motifs, combined with a purist and reserved interior. A dynamic change of color, material and music sets the individual areas of the store apart. On the ground floor light oak and dark walnut wood, sand-colored terrazzo floor, steel and brass frames showcase the products and create a warm and Mediterranean atmosphere. The upper floor, which is dedicated to the different food concepts, is characterized by different floor heights and seating arrangements. Blue glass table tops and brass lights are reminiscent of Shanghai's "Art Deco heritage". In the Fine Dining area, a 36 meter long wooden table lends a rustic touch and invites you to dine (Fig. 40). The customer experiences the product world of the brand very authentically through a culinary experience or practical experience in the cooking school.

Why Is It Innovative?

Innovation of Meaning

Even thought this flagship location offers an assortment of original products available for purchase, the amount of design put into the concept makes it quite different from a regular store. In addition, a lot visitors come in to take cooking classes with renowned chefs

without making any purchase. This location is dedicated to cooking sessions and experiencing Zwilling's kitchen utensils in practice (Fig. 41). Without being aware of it while cooking the attendees can truly appreciate the quality of the brand.

Figure 40. Zwilling restaurant

Figure 41. Zwilling cooking class

IKEA

Ikea City Expansion

General Description

KEY INFORMATION

Country: worldwide

Industry: Home decor

Number of stores: 6

Innovation of meaning: Experience city life

Website:

The Swedish retailer of furniture and home products, known for its large stores extending over 28000 square meters, launched its first city centre site in the Upper East Side of New York. Ultimately, Ikea intends to bring out more than a dozen small format locations around the USA to meet urban citizens' shopping needs for kitchen supplies, décor, and storage devices fitting their smaller households. Globally, IKEA's primary focus remains on its larger flagship outlets. The company didn't abandon its spacious warehouse style stores model, knowing that people will continue to seek the "full IKEA experience." The small to medium concept would encourage customers to explore products and review home decor ideas without visiting the original stores, hence facilitating more complex orders, such as kitchens and bedrooms, and then purchasing them from the web-site. IKEA largely invested in digital, logistics and distribution in order to speed up its home delivery times from one or two weeks to a couple of days. City locations format is part of that change. City stores host Planning Studios, which offer innovative room environments focused on helping consumers find desired products and city-friendly solutions (Fig. 42, Fig. 43). The IKEA Design Studio is where customers can get personal assistance with kitchen planning, bedroom designs, living ideas in small spaces, and many more. Purchases made at Planning Studio provide convenient home delivery.

Why Is It Innovative?

Innovation of Meaning

"We need to step faster into the digital innovations where we can meet our customers digitally, on their smartphones but also in city centres, where many people live," the IKEA's CEO said. Now the company intends to actively exploit users' info, incorporate new kinds of payment methods, expand loyalty programs and online networks, and enable hands-free shopping in order to be more in line with consumer preferences. Gerard Groener, Ingka Centres MD, said: "The € 5.8bn that we are spending around the globe should see us embarking on new ventures, expanding into new countries and enhancing our current portfolio to build meeting places for a more omnichannel environment next decade." Ultimately, IKEA's new locations are closer to being well designed showrooms, than stores. While small elements of décor can be acquired on the spot, larger items can be bought only online or in traditional locations. Moreover, each city centered store incorporates a planning studio with computer stations installed where customers can plan their home design and choose fitting products. Therefore, inspiration drives customers inside rather than a necessity to get the Kallax shelf unit.

Figure 43. Ikea city expansion

Figure 42. Ikea city expansion

Camp

CAMP, The Family Experience Store

General Description

KEY INFORMATION

Country: the USA

Industry: Toys

Number of stores: 1

Innovation of meaning: Playground

Website:

CAMP in NYC blurs boundaries between shopping and experience. An interactive family store, a 3000-square-meter area sells toys and organizes seminars, fun activities and more, including a 'Dinner date' childcare option that is available for parents. CAMP is set up as a traditional store selling gifts, toys and clothes, nevertheless, guests are welcomed to walk through a hidden door and take a mystical passage to the CAMP experience space - The Base Camp. The entertainment space has a specific theme that changes every 2 to 3 months. CAMP also performs certain events daily, including art classes, design workshops, and even yoga sessions (Fig. 44). The idea behind building this toystore was to turn it into an immersive playground, where children can play with thousands of toys (Fig. 45). Surprisingly, toys make up for only 30% of sales, while gifts, novelties, apparel and tickets to paid activities – 70%. Moreover, the company offers families to register for membership to access their point system giving possibility to participate in exclusive activities and events at the store.

Why Is It Innovative?

Innovation of Meaning

"CAMP is a Family Experience Store – inside CAMP are rotating themed experiences. Every surface is a seamless blend of play and product," the CEO of Camp said. The store operates on the premise that people will prefer

to visit their space over some other source of entertainment or recreation, and then ideally purchase something once they're inside to bring the fun home. It's a shop kids are going to ask to go play, and that is not something a lot of retailers can claim today.

Figure 45. CAMP theatre

Figure 44. CAMP playground

LVMH Moët Hennessy – Louis Vuitton SE

Sephora Beauty Hub

General Description

Sephora, being probably one of the most famous beauty store chains in the world, was acquired by the French luxury group LVMH in 1997 that opened vast growth opportunities for the brand. However, innovation was embedded in its identity since the opening of the first store in 1969, when customers were able to try on products before purchasing, something almost unheard at that period. Moreover, products were placed on the shelves not by brands but by category. Today, the company sells across 2300 locations and 33 countries, with the latest annual growth of sales by almost 22% (Statista, 2019). Undoubtedly Sephora was one of the pioneers of the industry to open an online store launched in 1999. One of the key moments of its digital transformation happened in 2015, when Sephora Innovation Lab was launched in San Francisco with a sole goal to combine online and in-store shopping into a seamless experience. That is where new Sephora Experience was created, including the Beauty Hub (Fig. 46). In 2017 the first Hub opened its doors to the customers in Paris and a truly new shopping experience was introduced. This service allows to access a virtual look book to discover ideas and find inspiration from new trends through an electronic tablet, test virtually make up looks using the "Virtual Artist", find a perfect color matching of a skin tone with the "Color Profile", and to exchange beauty looks with the rest of beauty community through the "Beauty Board" (LVMH, 2017).

KEY INFORMATION

Country: Worldwide

Industry: Beauty

Innovation of technology: AR

Innovation of meaning: Beauty community

Website:

Why Is It Innovative?

Innovation of Technology

- Virtual Look Book: Large displays by each counter with touchscreen technology give access to a catalog full of ideas and inspiration for a personalized beauty routine.
- Virtual Artist: AR powered service which allows through iPads or connected mirrors to test make up looks in virtual reality without a need to use actual products (Fig. 47).
- Beauty Board: A social media platform where the looks created in store or from a smartphone can be shared. On the platform users are encouraged to give likes to their favorites, tag the products applied and actively exchange thoughts and inspirations within the Sephora beauty community.
- Beacon Technology: Through Sephora's app beacon technology can recognize when a customer enters a store, provides in-store map, daily promotions, and the user's online shopping cart or a wish list.

Innovation of Meaning

"Consumers are looking for retail stores to be creative spaces. They are looking for experiences. Digital is a critical element in retail — however, it is not just for the sake of adding new, cool technology. Our intention is to help our clients." (CBINSIGHTS, 2018) Sephora Omni Experience & Innovation chief manager recognizes that the company's mission is to make its stores spaces for freedom, fun and personal expression. Beauty Hubs are a are not just a new tool to buy products in-store and online, providing several purchasing options to clients, but also provide an entertaining and engaging experience. This service shows that the company responds to consumers' needs to do something more than just buying specialized and personalized products. The retailer is on the way of reinventing the purpose of a shop into a place of learning about the brands, products, and customers themselves. After the dispersion, the Hubs Sephora is targeting a new goal: to open new stores as smaller, more private spaces where the beauty workshops will take place. They will be focused on three core concepts: teach, inspire and play (TIP). The idea is that customers will come to the store maybe with an initial idea of some products they're looking into buying (e.g. mascara) or a certain makeup look they would like to achieve (e.g. smoky eye), and with the help one of Sephora's virtual advisors they'll be able to experiment and play around with different brands, colors and textures (Salpini, 2017). There

customer conversion will not be in the centre of attention, but the focus will be on the interaction and experience created between the brand and the customers.

Figure 46. Sephora beauty hub

Figure 47. Sephora Virtual Artist

LVMH Moët Hennessy – Louis Vuitton SE

Sephora Color IQ

General Description

When customers walk into Sephora in New York they may see employees inside who hold portable smartphone looking devices in their hands. Those gadgets examine the skin when placed onto the face identifying the precise skin tone of an individual and combining it with a sequence of numbers and letters from an online shade database (Fig. 48). The generated four-digit code is a Sephora user's Color IQ. The project was started in 2012 in partnership with the Pantone Color Institute to help customers identify their perfect match among the endless choice of foundations and concealers on the market and learn more about their skincare needs. Since then Sephora locations have provided over 14 million Color IQ matches and the brand has even developed a similar tool, the Lip IQ, for colors of lipstick. In case of Lip IQ version customers inspect their face with a handheld tool that helps them select the right tone of lipstick for their complexion. Once customers sign in to their account at Sephora.com and search online, they can quickly see the items that suit their skin tone. Sephora also sends emails urging clients to purchase their matches with the Color IQ.

KEY INFORMATION

Country: the USA

Industry: Beauty

Number of stores: 19

Innovation of technology: handheld device

Innovation of meaning: Personalized beauty

Website:

Why Is It Innovative?

Innovation of Technology

The Sephora + Pantone Color IQ device is based on Pantone's CAPSURE™, a lightweight, hand-held spectro-colorimeter used in the field of architecture to distinguish color with exceptional precision (Fig. 49). The device works as the first of its kind in cosmetics retail, capturing a picture of the skin processing it and assigning an official Pantone SkinTone number. Sephora beauty experts consult Sephora's Universal SkinTone Library on an iPad which stores over 1000 foundation examples to select what products make the closest match for each complexion scanned. In comparison with normal cameras that use ambient light, creating huge pigment variables, COLOR IQ illuminates skin surface from 3 different directions and does not require ambient lighting for precision matching (Pantone, 2012).

Sephora + Pantone Color IQ Handheld Device:

- New method of color measurement, including texture and surface sample variables, allowing for the most accurate definition of color;
- Uses powerful three-directional image capture technology;
- Records 27 color-accurate images in 1.8 seconds using 8 different visible illuminations and 1 ultraviolet illumination for unsurpassed accuracy.

Innovation of Meaning

"We believe that education is empowerment, and by enabling our customers to learn, we're allowing for both higher conversion and deeper brand loyalty," said Johnna Marcus, senior director of the Sephora Innovation Lab. "Color IQ and Lip IQ answers a big question: what's the right shade for me? There are thousands of shades out there, so we narrowed down that world to make things easier." 80% of Sephora consumers confirmed that learning more about beauty is of primary priority. Product education is one of the most important Sephora's digital initiatives.

Figure 49. Sephora Color IQ station

Figure 48. CAPSURE device

L'Oréal

Limitless Beauty

General Description

KEY INFORMATION

Country: France

Industry: Beauty

Number of stores: I

Innovation of technology:
AR & AI technologies

Innovation of meaning:
Personalized beauty

Website:

In May, 2019 at VivaTech fair L'Oreal presented Limitless Beauty – an array of innovative concepts evolving around digital and beauty experiences, showcasing how technology offers an infinite amount of opportunities and creates a paradigm shift for the cosmetics industry. Limitless Beauty introduces original services and greater levels of customization and personalization in the beauty market, acting on four key areas: technology, creativity, personalization, and agility (Fig. 50). New experiences are going to be implemented in the retail environments all over the world at stores, supermarkets, brand shops, travel retail, and in beauty salons where L'Oreal brands are placed. In particular, brands such as Lancôme, Kerastase, La Roche-Posay, Vichy, Armani etc. have developed bespoke ways to engage consumers and help them learn more about themselves and beauty. The main question that the company is trying to answer is "what is the retail store of the future?" Inside the stores, beauty recommendation and sales aspects seem to dominate the era of customization. For example, consumers will be able to test a conversational bot, created in tandem with the brand L'Oréal Men Expert and a smart mirror that helps identify the perfect makeup and style, following a partnership with Alibaba, an e-commerce retailer. This kind of tools help users learn more about their skin and the brand and get tailored advice. New technologies such as Augmented Reality, Artificial Intelligence, voice, allow us to deliver more and more customized and advanced experiences to all, to manufacture in a more agile and sustainable manner, to bring users into the act of creation and to bring them an experience which is available anywhere, at any time.

Why Is It Innovative?

Innovation of Technology

- Among the major innovations last year, L'Oréal showcased its Virtual Hair Advisor - an app created by ModiFace, Augmented Reality and Artificial Intelligence subsidiary. The Virtual Hair Expert will allow people to use voice control to instantly try new hair colors and get helpful advice from experts from L'Oréal Professional.
- Vichy's SkinConsultAI is a digital skindiagnostic created in collaboration with dermatologists to diagnose signs of aging and provide customized skin care tips. This platform was developed in partnership with ModiFace and L'Oréal R&I and is focused on 15 years of studies on skin aging and machine learning.
- La Roche-Posay's Effaclar Spotscan is an online application co-created with dermatologists to examine skin sensitive to acne. This tool gives advice and tailored guidelines based on Artificial Intelligence and scientific evidence to resolve acne breakouts, prevent them from worsening and consult a dermatologist if necessary.

Innovation of Meaning

L'Oréal objective is to engage customers through service design, digital strategy, and interior design. When consumers enter a store or a hair salon they should be provided with tailored experience and learn something new about beauty even without making a purchase. People come to the stores to learn their skin age or to see what hair color will look best on them and that's when Limitless Beauty experiences come into play. These initiatives were inspired by the group's commitment to innovation and digital technologies in growing the business and surprising consumers around the world. In order to remain the first beauty company and the world's beauty leader in innovation L'Oréal keeps creating, experimenting and breaking boundaries of traditional beauty and retail, according to the company beauty must be for all.

Figure 50. L'Oreal Vivatech

Freitag

Sweat Yourself

General Description

The new site of Grüngasse in Zurich is an adventurous location of the Swiss label: named Sweat Yourself, the shop is essentially a mini-factory (Fig. 51). There guests can find a large variety of material scraps to pick from, along with a professional staff and the necessary equipment. After booking an appointment for a personal creation experience, customers are asked to pick every feature of the bag from the textile leftovers from the actual Freitag factory. The creators will then use the cutter and plexiglass templates, the punching machine and the welding machine at various stages of production, as if in the true factory. Finally, the company workers finish the product while the clients get to relax with a beverage. The concept completely lives up to its name as the conditions seamlessly imitate the assembly line. Certainly, the design of the micro factory is consistent with all FREITAG stores and is equally minimalistic, however there is a certain distinction in this environment because it is designed to inhabit a specific experience.

KEY INFORMATION

Country: Switzerland

Industry: Apparel

Number of stores: I

Innovation of technology:
mini factory

Innovation of meaning:
Make it yourself

Website:

Why Is It Innovative?

Innovation of Technology

Sweat Yourself does not look as a typical store at all when visitors walk in, reminding more a mini factory or an artistic workshop than a retail location thanks to such novel for any

store technological elements as worktables, production tools and machinery, and a conveyor belt stretched around the space (Fig. 52).

Innovation of Meaning

FREITAG transfers the stages of production and the entire responsibility for the bag's design to future owners, providing complete personalization and co-creation. People come to the store to live though the experience rather than shop.

Figure 52. Sweat Yourself experience

Figure 51. Freitag flagship store

Canada Goose

The Journey

General Description

Almost 8,000 shoppers walked through The Journey, an experiential store project in Toronto during the 2019 winter holiday season (Bourke, 2020). Originally, it was built to advertise a new shop in Toronto. The Journey surprisingly does not carry any stock and the only way to order a coat is from a touchscreen display linked to their website. How does The Journey work then? The space is divided into a series of different rooms with a predefined path a visitor must follow to get the whole experience.For example, there is a cold chamber with actual snow and freezing temperature under -12 degrees Celsius, and immersive storytelling shifts as the seasons change on the screen. The business embraced the potential of immersive retail and exploited its creative aspects, aiming at storytelling. The staff accompany visitors through a passage of interactive rooms until they end up in a space where they can search the online store, chat to sales staff about sizing, and schedule a delivery (Fig. 53).

KEY INFORMATION

Country: Canada

Industry: Apparel

Number of stores: I

Innovation of technology:
Interactive displays

Innovation of meaning:
Theatre

Website:

Why Is It Innovative?

Innovation of Technology

- The Journey is designed to replicate the environments and scenery of the Arctic with a combination of OLED TV displays, 4 K laser graphics, panels crafted to imitate rocks and indoor snow machines (Fig. 54). The combination

of new technologies and new applications of familiar equipment create a unique space, making the brand clearly stand out from the competitors.

- The original branded jackets are placed in a dedicated room with digital hotspots all over them that activate a screen displaying product information.

Innovation of Meaning

Canada Goose created an imrovised theatrical space displaying Arctic severe conditions where the audience becomes explorers of the North. Realizing that buyers can order whatever they want online, retailers like Canada Goose are attempting to make their physical shops more appealing to visitors in a new way, enhancing inside experience, recognizing that unforgettable moments can contribute to purchases. More and more companies seek to adopt similar approach: less production, more engagement. The intention is that greater participation may potentially result in purchases, even though shoppers do not spend any money in offline locations.

Figure 54. Jacket hotspots

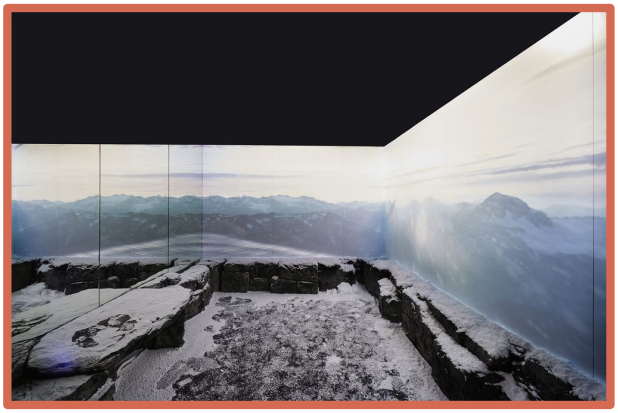

Figure 53. Arctic room

Nike

House of Innovation

General Description

Six floor Nike building occupies more than 6000 square meters, where the concept of living retail unfolds. Innovative technologies on every floor introduce spaces and environments which are unique and engaging. All around the store, users can appreciate solutions that are personalized, intelligent, and seamless. A full dedicated personalization wing resides in the Arena zone, celebrating Nike's innovative DIY energy and providing a wide range of laces, fabrics, badges and other accessories to decorate any pair of trainers (Fig. 55). In addition to offering consumers an option to make their unique products, Nike also brings buyers where the company started. The shoes floor showcases foot scans, model sketches and samples, an opportunity to give consumers a broader narrative of the time and energy taken into constructing the Nike shoe. The store also plans to invite shoe designers to speak about the sneakers they've designed, the creative process, and what their products can mean for the shopper. Nike House of Innovation embraces the concept of living retail — a unique and engaging consumer experience in a setting that is as engaging as digital.

KEY INFORMATION

Country: Japan & the USA

Industry: Sport goods

Number of stores: 2

Innovation of technology: combination of technologies

Innovation of meaning: Learn & Personalize

Website:

Why Is It Innovative?

Innovation of Technology

Nike's newest location is more than just an ad for the brand: It is also an outstanding case of how mobile technologies can bring value and convenience to the consumer:

- QR codes stamped at the base of the mannequins allow consumers to check items being displayed without searching around the store.
- Visitors can access the' request try-on' app in order to place certain goods into the virtual changing room and then receive notification when items are ready to try on in real life.
- The store organised Instant Checkout tables on each level, equipped with bags and a hanger trays, to enable clients purchase within the app avoiding lines at checkouts.
- The Nike Arena (Fig. 56) is a circular space noticeable from all 6 levels, is an electronically-enabled central space equipped with LED screens. By using remote control projectors, installed on both the floor and ceilings above, this room also functions as an immersive multimedia sports trial, studio and shopping area.

Innovation of Meaning

Convenience and customization tend to be primary goals for the brand but gathering consumer data is also on the agenda. The company rigorously studies the data they receive from consumers, so that the store itself can become a hub. This is a big development towards eliminating the gap between offline and online. Nike uses a cell phone as a type of supportive partner. When you reach a certain pont, the smartphone and digital experience, coupled with physical reality, become very powerful.

Figure 55. Nike personalization

Figure 56. Nike Arena

Samsung

Samsung KX

General Description

KEY INFORMATION

Country: the UK

Industry: Consumer electronics

Number of stores: I

Innovation of technology: combination of technologies

Innovation of meaning: Community hub

Website:

Samsung KX opened a new location in Coal Drops Yard, London's Kings Cross which resembles a science museum (Fig. 57). It's a paradise for fans of Samsung. The first peculiarity is that guests cannot directly buy items inside because there are no cashiers or prices indicated on any of the items. Alternatively, Samsung delivers an experience that id hard to replicate. The 1800 square meters store provide visitors with a variety of activities and knowledge-sharing sessions designed in collaboration with a number of local communities (Fig. 58). Built inside an architecturally impressive building, the new shop houses vast open areas, entertainment rooms, interactive kitchens and 3D printing areas, as well as the world's first interactive vehicle cabin. There is also a lot of headset music stations, a café, and couches where visitors can relax and watch Television.

Why Is It Innovative?

Innovation of Technology

- Digital Cockpit: Imagine the future of cars with this immersive, digital driving experience.

- Galaxy Graffiti: using the Galaxy S10's spray can to virtually sketch on the giant 10-metre wall.
- DJ Galaxy: Discover the magic of sound–music comes to life by real-time LED audio projection.
- AR Message Tree: Fill the air with AR messages for people to reveal.
- 3D ME: enjoy the creativity by making a mini 3D model with the Galaxy S10.
- Collage Me device: transform a selfie into a special, customized collage – a postcard to remember or to pin onto the Samsung KX screen panel.

Innovation of Meaning

"It's harnessing our innovation and showing how it fits into your lifestyle," says Weller, pointing to the screen on Samsung's smart fridge, which searches for recipes based on what's inside — and tells you how old each item of food is. Samsung KX is a spot where aspiring innovations coexist with culture, design, architecture etc. where Londoners can try Samsung's new tech to understand, interact, and connect with people of diverse backgrounds, generations, and professions. The place allows people to spend the entire day there, whether it's taking a computer to a vibrant co-working area facing King's Cross or meeting friends.

Figure 58. Samsung KX

Figure 57. Samsung presentation hall

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L&T

Sport House

General Description

The Lengermann & Trieschmann Sports House (L&T) in downtown Osnabrück launched a novel idea for Germany: a mix of shopping and surfing. The Citywave pool is situated on the bottom floor of the L&T shopping centre, in the middle of a large, round deck. It ensures that there are a lot of different spots from where it is possible to watch people surf on endless waves (Luxury Properties, 2018). Another driving force of daily flow of visitors to L&T Sport House is a fully funcioning 260 square meter members exclusive work out gym, called City Gym, with luxurious facilities such as a steam room and relax zone, personalized exercise and altitude-simulated training. The advantage of the innovative training lays in reducing impact and improving performance by emulating the environmental conditions being in the Alps at the altitude of approximately 2500 metres.

KEY INFORMATION

Country: Germany

Industry: Sports goods

Number of stores: I

Innovation of technology: new combination of old technologies

Innovation of meaning: Attraction

Website:

Why Is It Innovative?

Innovation of Technology

The sufing pool is as large as 350 square meters an is located on the grounf foor of L&T Sport House (Fig. 59). This is the second indoor surfing pool in Germany and had to be specially designed to fit their needs. Indeed, the creation and esteblishment process took several years and a unique experience was finally presented in 2018. Not only the pool had to be built but also the building had to be adapted hold water sports. Firstly, the heating, air

conditioning, ventilation and lighting of the new facility needed to be incorporated into the control system for the current building. Secondly, they had to establish and enforce a complex ventilation strategy for the "Hasewelle" region for the "standing wave". Summarizingly, inspite of lacking digital technologies or automation processes, it was definitely an innovative project where new technologies enabled the surfing experience.

Innovation of Meaning

"*We are almost half an amusement park with a department store attached,*" managing director Mark Rauschen explains the concept of the spectacular new-build. *"We bring sport into the sports' house."* The CEO also says that they are now part of the leisure industry, offering a lifestyle. L&T does not offer soulless products, but a passion, a mindset. People are gradually loosing connection with things. In addition to the wave pool, which took 10 years to build, there is also L&T City Gym, where visitors can practice sports and watch sports live. There are 840 square meters of facilities and exercise areas in which people can practice under high altitude conditions. Play sports and purchase sports, all under one roof.

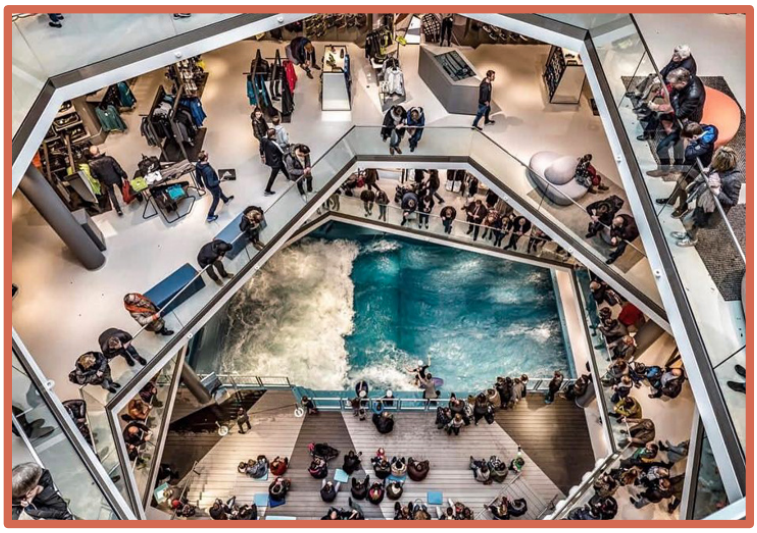

Figure 59. Sport House indoor surfing

Adidas

Adidas LDN

General Description

KEY INFORMATION

Country: the UK

Industry: Sports apparel

Number of stores: I

Innovation of technology:
AR & RFID technologies

Innovation of meaning:
Learn & personalize

Website:

The Adidas LDN stretches across four floors and showcases a variety of exclusive retail initiatives and experiences that make it be ahead of competitors like Nike's Innovation Houses and Puma's headquarters (Fig. 60). The location may seem a late adopter, but it surpasses its competitors by deeply investing in consumer engagement. Over 100 digital touchpoints found inside the store are entirely enabled by renewable energy solar panel placed on the roof. Adidas has broght to life a space that nurtures London's culture, with the shop hosting exhibits and artworks by local crestors and selling items made specially for the LDN store. Additionally, answering to local needs the company has a team of employees who jointly speak 31 languages to appeal to more than 20 million tourists visiting London. There are various engaging activity spots across the levels, with the MakersLab being one of the retailer's central points. The personalization hub not only helps customers to customize soccer shirts, it also opens up imagination to people in the laboratory area. Besides designer-led community workshops, consumers can select from shelves of patches some decors to add onto their newly bought clothes in the moment. Guests may also get involved in the in-store activities by trying their new shoes on a treadmill sprint, signing up for an professional fitting, or hosting daily group events.

Why Is It Innovative?

Innovation of Technology

- One of its leading inventions is digital changing rooms with digital mirrors, operated by RFID by Avery Dennison's intelligent labels, Detego's app, Pyramid Machine and Nordic ID. When the consumer comes in, the screens identify the product by sensing the RFID tag and show the product details directly on the mirror offering to try a different color or size without leaving the room.
- Online creativity proceeds through the Adidaas omnichannel application. Aside from being able to shop goods and book sneaker-cleaning supplies, the app allows the store staff to find the client of-store for additional help. The' Bring It To Me ' function lets shoppers scan items, ask size and instantly purchase without standing in line –avoiding dedicated cashier desks.
- Sensible augmented reality apps are also available on the app's product pages for their iconic shoe series. Provided by Vyking, the AR technology allows the users to try on shoes virtually and project the shoe realistically in 3D, complete with its detailed textures.

Innovation of Meaning

Adidas brings consumer experience to a new level with the LDN store, where weather you are a new customer or a loyal client with no intention of purchase the company will encourage you to pause your life and pass time inside. Personalization of the experience is what drives consumers in, expressed through numerous touchpoints, customized products and services let guests live their own storyline.

Figure 60. Adidas LDN

Target

Open House

General Description

Target presented Local Projects, an organization primarily known for the construction of museums, with 2 challenges: 1) to develop a learning centre, discovering ways to promote and sell IoT category products; 2) to engage creators and Target's retail specialists in a meaningful manner by better involving them with consumers (Fig. 61). Open House is a 350-square meter venue showcasing a five-room home constructed entirely of clear acrylic. Every room was built as projection screens, turning the entire house into an interactive theater (Fig. 62). When guests arrive, the interactive elements come to life as they sense human presence. Then they pick from a set of stories that illustrate how connected products fix issues like a house fire or a crying baby. Knowledge, design, product development, assembling and the actual launch have been finished within six months.

KEY INFORMATION

Country: the USA

Industry: home products

Number of stores: I

Innovation of technology: IoT & AR technologies

Innovation of meaning: Theatre

Website:

Why Is It Innovative?

Innovation of Technology

- Immersive displays embedded into the Perspex walls respond to customers' movement of the items as they navigate through the' home,' testing and exploring the products.

- All animations are installed with live code and an API call to the items that come into action as the story progresses. Enhanced with sound effects such as child's screams or a window that crashes after a robbery, the experience enhances the emotional aspect of each storyline.
- After visiting the home and capturing the big idea of IoT, guests are taken to interactive tables for a practical experience with the products.

Innovation of Meaning

Target Open House is a permanent museum and store concept that confronts the traditional meaning of shopping. Not only is it creative, but it also incorporates a revolutionary approach, creative architecture, and innovative technologies to construct a modern, inclusive retail model. Visitors who enter the space become the audience in an experimental theatre contemplating how digital projections display modern lifestyle scenes. The spectators rather than consumers walk through the experience and leave with a range of emotions that motivate them to learn more about the products and test the applications themselves.

Figure 62. Open House rooms

Figure 61. Open House experience

IX. Discussion

DESCRIPTIVE STATISTCIS

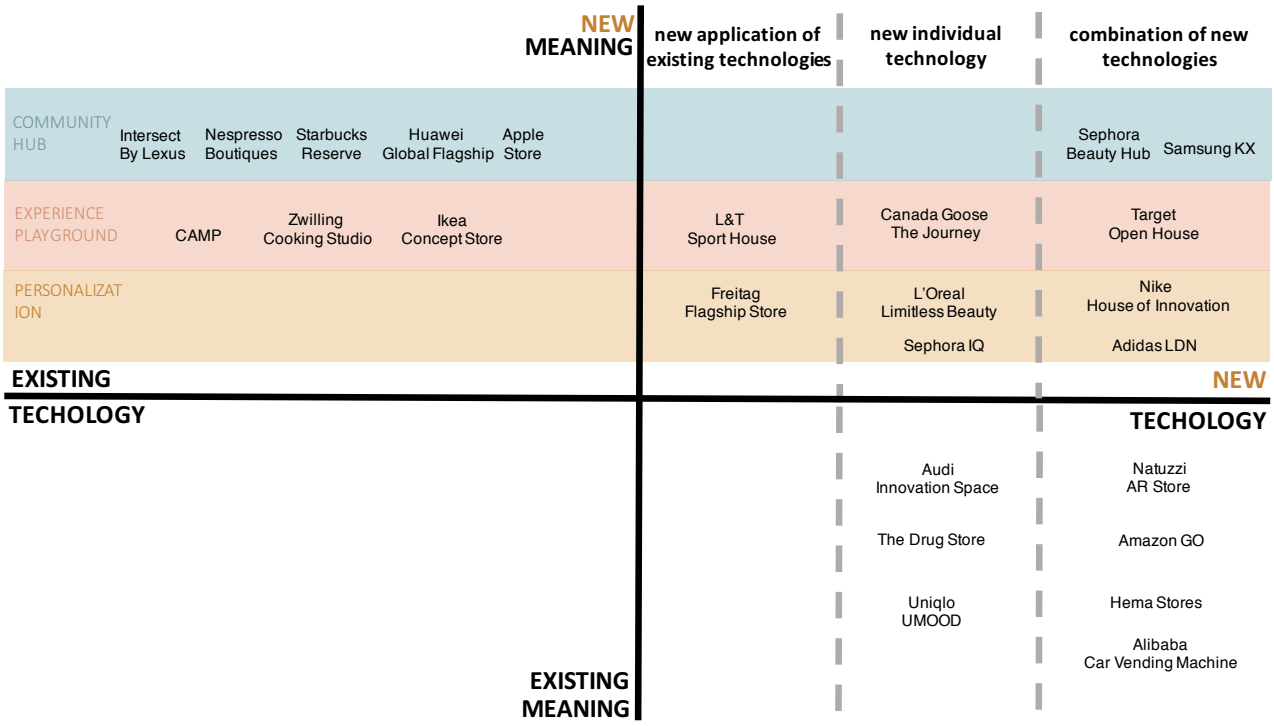

Figure 63. Case clustering across technology and meaning dimensions

Analyzing 25 company cases allowed to deeply study methods of implementing innovation in retail that, consequently, unveiled similar patterns and strategies that companies from various industries employ to rediscover their physical retail environments (Fig. 63). Following their journey in becoming innovative and enriching customer experience they can either introduce new technologies or new meaning to the experience. Moreover, sometimes even without realizing it, technology epiphanies arise when combinations of innovation in technologies and in meaning get seamlessly combined in one concept.

Interestingly, the distribution among cases is almost even: 7 cases represent innovation of technology, 8 innovation of meaning, and 9 technology epiphanies (Fig. 64).

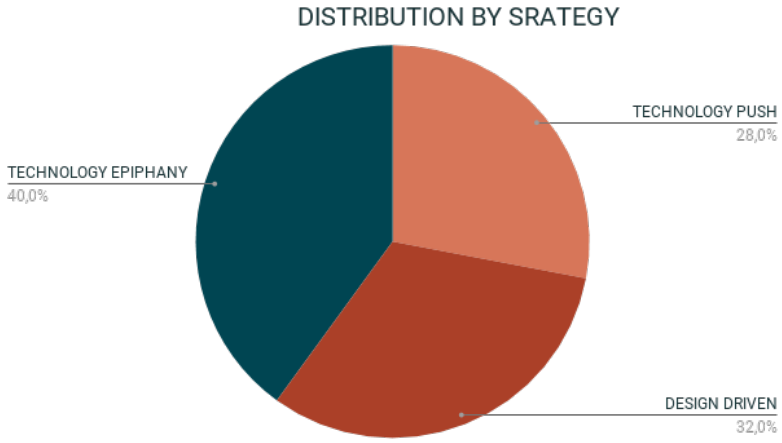

Figure 64. Distribution of cases by strategy

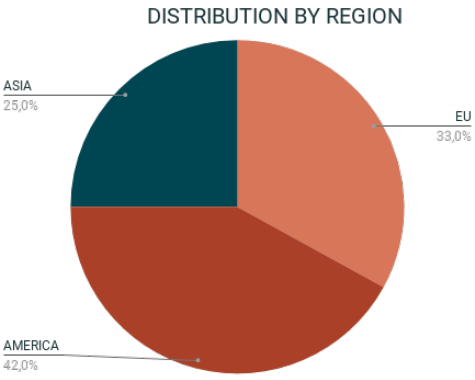

Figure 66. Distribution of cases by region

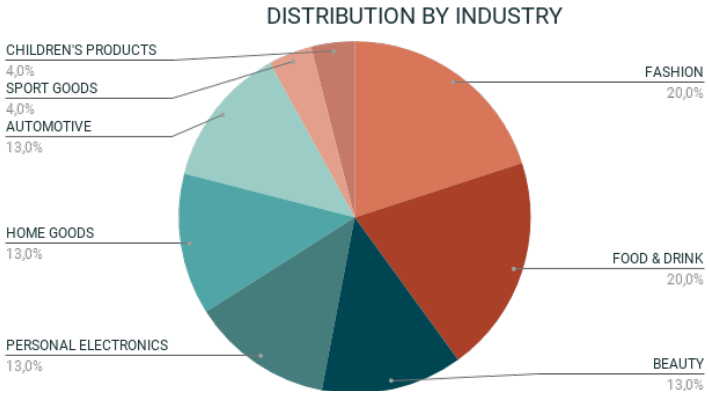

Figure 65. Distribution of cases by industry

Moreover, the companies come from different industries, such as personal electronics, grocery stores, fashion, beauty, sport goods, and even virtual marketplaces that engage into physical retail (Fig. 66). Specifically, top 2 represented industries are food & drink and fashion, while less common fields were sport goods and toys. As for geographical location, most companies' headquarters are located in Europe which suggests that, in general, European companies are more innovative when it comes to physical retail (Fig. 65). That may be supported by the fact that North American consumers are more likely to shop online than those in Europe who prefer shopping in a store (Da Silva, 2020). So, in general, in the EU physical retail is more popular than in American or Asian markets. However, when looking at new technology cases around a half of them are developed by Asian giants, such

as Samsung or Alibaba. In order to better understand specialties of technology epiphanies it is essential to look into the 2 other strategies separately and then proceed to their combination.

CLUSTERS PROFILING

Technology-Push Innovation

Companies frequently occupy themselves with innovative technologies as overall technological landscape keeps evolving at a very high pace. In 1965 Gordon Moore made an observation that computers would dramatically increase in power and decrease in relative costs at an exponential pace (Gulett, 2019). In fact, today the world faces a wide variety of disruptive technologies, according to Massachusetts Institute of Technology, including quantum computing, personalized medicine, unhackable Internet, digital money, artificial intelligence, and so on. Naturally, businesses are actively trying to incorporate them, investing in scientific research, developing in house, M&A, or turning to open knowledge. However, the process of invention and innovation, being quite expensive, is affordable for a few companies – multinationals with vast resources. Therefore, the majority of firms considered in this research are international with stores all over the world, where they strategically test and implement new concepts. For example, the first Hema store was opened in Alibaba's home city Hangzhou and now with over 150 locations in China it is making plans to expand to Europe. Equally, Amazon GO started in the USA and now is testing the concept in Lisbon, Portugal, as well as through pop-up stores in Milan, Paris, Madrid, Berlin, and Amsterdam. In general, the first innovations are introduced in their home markets and then are replicated in other regions. Some technologies represented in this quadrant include radio-frequency identification, augmented reality, wearable devices, and face recognition technologies.

Inside the bottom right section of the matrix are located examples of technology push innovations, where innovation is determined due to a significant change in technologies. However, under new technologies in this research are considered also those technologies that might be not new to the world but new to the market and the company. So, in this research the company perspective is taken, rather than the general one. This slightly

different look was chosen to avoid limited sample size. If radical change in technology is solely attributed to companies that invented them then the number of cases to investigate would be constrained to digital natives or technology intense industries. Essentially, these technologies must be new to the company and to the market but don't have to be new to the world. Being innovative to the market, they represent radical changes in technology and, consequently, can be considered examples of technology push innovation. Therefore, innovative implementation of the technologies is investigated, where a firm might implement a new combination of existing technologies, a single new technology or a combination of new technologies. According to the US Code of Federal Regulations innovation is something new or improved, having marketable potential, including: (1) development of new technologies, (2) refinement of existing technologies, or (3) development of new applications for existing technologies. Following this definition company cases were placed on the technological scale. Moreover, a distinction was made between firms' initiatives when a single new technology was pursued and when an integration of several technologies was implemented in order to highlight the difference in complexity. However, higher complexity doesn't necessarily lead to better performance as the Institute for the Future argues that technological change is increasingly driven by the combination and recombination of foundational elements (Schiller, 2014).

Another noteworthy fact to mention is that all of the examples of innovation refer to service innovation rather than product innovation. Service innovation is related to service offerings that directly or indirectly result in value for the firms and its customers and clients. (Salunke et al., 2019). Additionally, a lot of studies consider new technology a powerful driver of service innovation (Tether, 2005; Toivonen & Tuominen, 2009). While service innovation is often treated as containing interactive and supportive elements essential to creating competitive advantage (e.g. Agarwal & Selen, 2011; Salunke et al., 2019). The interactive side of service innovation can be external or front-end as it generates direct value for users, while the supportive side refers firm's internal processes, creating customer value (Salunke, Weerawardena, & McColl-Kennedy, 2013). In accordance with this concept, the existing research recognizes service innovations as service solutions that create direct and indirect benefit for an organization and its consumers. For example, Uniqlo's UMOOD station is a service that helps to find a perfect t-shirt for consumers, fitting their mood by analyzing their brain activity. Here, service innovation lays in personalizing product choice

leveraging biomarketing technologies. On the other hand, Amazon Go creates value for end consumers by saving their time inside the grocery store.

Design-Driven Innovation

Based on an assumption that design-driven innovation generates new meanings of products and services, the concept of innovation of meaning has been introduced (Verganti, 2003). It suggests a much broader view on consumer needs and problem solving while inspiring more radical changes. DDI is focused on generating new meanings which address both tangible and intangible needs (Verganti, 2008). Therefore, DDI and value creation are inseparably linked as new meanings influence perceived value of products. Even though most previous researchers focused on innovation of meaning of products, this paper explores cases where the concept is applied to services to move the motivations behind visiting retail locations away from pure shopping. By innovating physical retail, organizations get to enrich customer experience and reinforce relationships with consumers. DDI in retail is particularly current due to the changing role of physical retail, so firms come up with new strategies to lure consumers in stores. After analyzing the cases they were divided in 3 groups that stand for different new meanings. Naturally each retailer has a more specific idea behind their DDI but in order to identify similar patterns 3 collective meanings were generated: community hub, experience playground, and personalization centre (Fig. 67).

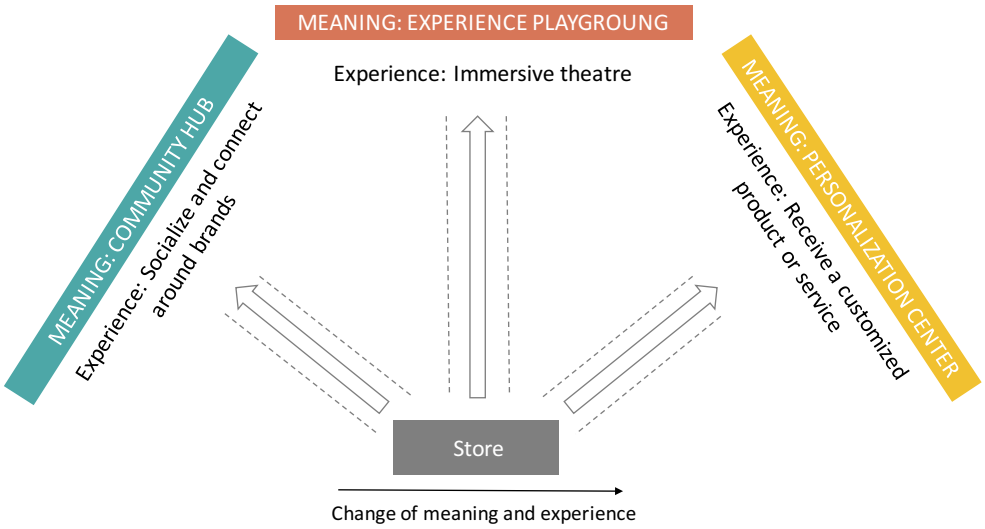

Figure 67. Change of meaning in retail. Adapted from: Verganti, 2016

Community Hub

The first group of cases is united under community hub concept that is becoming more popular nowadays. Particularly, the majority of companies researched engage in this new meaning and use similar strategies. In its core the goal of the strategy is to create a community centre inside a store around a particular topic or brand. For example, Starbucks around coffee, Apple around Apple products, and Lexus around luxury (Fig. 68). They try to attract people by acting on a basic human need to be a part of a society. So, these companies create such environments that provoke dialogues and give room for discussion. Interestingly, community hubs give room in both senses, material and non-material ways, as the size of these shops is quite extreme, starting at approximately 1800 square meters and reaching up to 12000 square meters. One of the reasons for such large spaces is to give users more freedom, open environments where they feel comfortable to work, rest, and relax with their friends (Fig. 68). In short, they should lose the stressful feel of shopping and treat the store as a place to get together and spend free time (Hattula,2017). Another important aspect is time because this kind of retail locations will encourage visitors to stay inside for as long time as possible. Being one of the most valuable resources, the more time is spent in-store the more important the experience becomes for a consumer and the stronger their connection establishes with the brand. Consequently, operating vast spaces and even entire buildings firms arrange various areas that highlight the new meaning: lounge areas, open space working stations, lecture halls, restaurants, and even art galleries. Given such a wide range of spaces to connect, brands also take advantage to

Figure 69. Apple Store

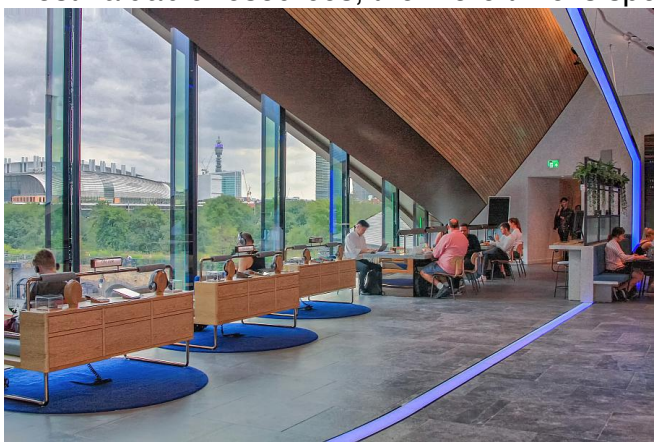

Figure 68. Samsung KX

share knowledge with the visitors through company presentations and inviting local influences or specialists to carry out public talks and master classes.

Certainly, not every community centre is equal, especially it depends on the market that the company serves. Specifically, premium brands, such as Lexus and Nespresso have a different approach to this concept because of their exclusivity and higher price tag. Therefore, they resemble a closed community, where only loyal members are allowed. Naturally, their events are usually more private, inviting only limited number of people, and the environments are less liberating, even though they manage to create a strong sense of belonging. To be precise, Nespresso even calls its stores boutiques elevating coffee to premium level and providing services exclusive to its members. While INERSECT by Lexus is a unique place lying between home and office which can be accessed only by booking on their website. Another point of differentiation is geographical location of the store because companies adjust to local cultures changing accordingly the design and range of activities offered. With 6 Reserve Roasteries around the world Starbucks made sure that none of them are identical from outside and inside. Their location in Japan is decorated with the help of several famous artists that only locals to the area may recognize, while the New York café resembles a nearby skyscraper made completely out of glass walls (Fig. 70). What is more, their menus and coffee flavors are also very different as Starbucks sources the beans from local suppliers.

Figure 70. Starbucks Reserve around the world

Taking a look at a Samsung KX, which is located in the heart of King's Cross, it truly supports the Londoners. The store is in partnership with 27 local charities and organizations that share skills and add value through deep and meaningful collaborations, such as King's

Cross Speakers who manage there a public speaking course. In spite the fact that companies differentiate their retail locations across different regions, a lot of them pursue Apple-born town square concept where shops are made to fit urban context and become a place in a central part of the city to get together during the day.

Experience Playground

When people think about playground the first thing that comes to their mind is an area in a park for kids to play. However, if one looks into the meaning, according to Cambridge dictionary playground is essentially a place where people enjoy themselves. There is no reference to age or a particular place where to have fun. So, some retailer opts for this strategy when redefining their physical retail. Making people curious and involved inside the store is key to attracting customers. Playground does not necessarily stand for gamification of every element of retail but it brings interactive, joyful micro moments in consumers' everyday lives.

One way of looking at this meaning is an immersive theatre, where visitors are assigned to follow a particular path across the space to unveil different scenarios. Such concept was employed by Target, which established its first Open House next to San Francisco's Museum of Modern Art as an immersive museum and playground for adults combined. Its slogan sounds "Come play!", inviting users to try out the latest technologies at their gaming station. Moreover, when people enter the space they are invited to walk through a series of white semi-transparent boxes activated by their movements and projecting different scenes that may happen around the house. Similar experience but on a smaller scale was offered by Canada Goose where visitors of a shopping mall were invited to live arctic experience, following a special path and interacting with the space.

What definitely unites the playgrounds is the ability to engage with the space, immersing themselves into a certain theme. In case of Canada Goose it's extreme conditions, for Ikea it's living in a big city and for Zwilling it's cooking. Controversially, in the end of their journey there is often no cashier desk as brands truly focus on providing memorable experiences rather than making sales in these locations. Certainly products can be instantly purchased on their websites but in-store retailers aim to provide what is not so easy to reach online – joyful life experiences that they will remember and then talk about with friends at a dinner party. According to companies' managers they believe that

investments in such spaces will be repaid by a high increase in online sales (Edmiston, 2019).

It is noteworthy to mention that not all of the stores are permanent and are introduced as pop-up locations in order to present a new collection or, for digital natives, to bring a part of their business offline. For example, Amazon Loft for Xmas opens its doors just for several days every holiday season in European capitals and delivers a unique and innovative experience linked to the Amazon world (PYMNTS, 2018). Nowadays, pop-ups with a broad variety of purposes are appearing in an even larger number of spaces around the world. Often it's about introducing a new line of products and sometimes it's about expressing a brand's ideals and values.

Figure 71. Sport House

Comparing experience playgrounds with community hubs there is definitely more interaction with the space rather than socializing involved. While in community hubs the main focus in on bringing people together, playgrounds leave visitors room to experience their own storyline sometimes even without any staff members or human interaction. Moreover, in some stores consumers can play a spectator role like an audience in a theatre. Accordingly citizens of Osnabruck town in Germany frequently go to L&T sports retailer to watch others surf through the waves of a special pool in the middle of the store (Fig. 71). Overall, consumers seem to come to this kind of stores for unique branded experiences even if they have no intention to buy anything.

Personalization Centre

User co-creation of new products has been praised for increasing customer interaction and satisfaction that may also result in improved quality of new goods and services (Prahalad and Ramaswamy 2004; Nysveen and Pedersen 2014). Consequently, in retail there may be a rapid growth of innovative technologies and applications that display significant value and multifunctional use in-store. It is undoubtedly true that transformation of retail today requires a greater emphasis on consumer experience and customization.

Customer co-creation has been adopted by start-ups and existing retailers respectively, and has spanned across various industries. Users can now design their own Freitag bag choosing materials and designs, find their unique shade of foundation with Sephora Color IQ, or build their own athletic sneakers using the NikeID program. Manufacturers with well-established brands such as Nike and LVMH can now integrate retail operations more effectively, using mass production to reinforce their brand relationships and ultimately improve consumer trust by exploiting the psychological ownership effect that is usually generated by co-designing items (Fig. 72). Either co-development is incorporated into an established business concept or prompts the development of a new one, if enabled by the correct structure and practices, it provides a governance process that can generate substantial benefit for consumers, some of which could be retained by the manufacturer. The motivation for companies to involve customers in co-creation in stores is creating experiential atmosphere and can also act as an incentive for businesses to improve customer interaction, enhance brand recognition and loyalty. Research on co-creation in points of sale focuses primarily on the value of co-creation as compared to the co-creation of products. The immersive environment in-store increases the quality of the experience attributable to the sensory stimuli it creates (cf. Grewal and Levy 2007). The shop setup often allows collaboration with someone else. Although it may reduce the effectiveness, it enhances customer overall experience (O'Cass and Grace 2008; Walker and Johnson 2006).

Figure 72. Nike personalization centre

Since previously product creation was completely done at production sites in order to share this step with consumers', new technologies needed to be employed, from literally establishing mini factory at Freitag headquarter store to artificial intelligence powered tools and services by L'Oréal. New technologies and personalization go hand-in-hand, where consumers can create bespoke products digitally and physically in-store. Nike came early in the game of co-creation with its NikeiD service users could design shoes that could be

personalized. On the platform, they can build a custom design with easy-to-understand tools by choosing fabric, design and embroidery. Today, in NYC House of Innovation 000 customers may do the same procedure within the store and even meet with the specialists who then construct the sneakers on-site in the workshops. Moreover, the Nike by You range is placed on the highest floor of the shop with models that can be tailored and adjusted to the consumer's specifications. In fact, the company offers Nike Plus customers' individual co-creation meetings with footwear designers in the Expert Studio. This is clear than personalization is brought to a new level by the companies who focus their points of sale on co-creation, weather through wider range of items and elements to personalize or engaging visitors in experiences in-store that will help find a product fitting one's individual characteristics and needs. People come to such stores because they want to express their creativity, so they become creativity hubs for consumers.

Technology Epiphanies

The region of the matrix that is particularly special is the upper right corner where technology push and Design-Driven innovation overlap into technology epiphanies and new meanings get empowered by new technologies. Modern researchers propose a growing potential of this concept (Verganti,2008, 2011, 2016; Buganza et al., 2015) and state that the process of design thinking can create opportunities for employment of new technologies. Following the inside-out process companies that engage in innovation of meaning gradually involve external members into the innovation process. Therefore, in today's worlds there is a growing pool of new technologies and the challenge lies in not coming up with technological innovations but rather in finding meaningful ways to use them.

There are various definitions of a word "epiphany". According to Cambridge Dictionary epiphany means "a moment when you suddenly feel that you understand, or suddenly become conscious of, something that is very important to you." While Merriam-Webster Dictionary defines the term as "a usually sudden manifestation or perception of the essential nature or meaning of something." From both examples it is clear that epiphany is related to that "Aha!" moment which Newton had when an apple had fallen on his head or when freckles on a girl's face catch an eye of a young man and he falls in love from the first sight. In sum, it is a life-changing realization of the reason "why?" that changes the rest of the picture. So, companies that search for technology epiphanies aim to find ways how

innovative technologies can help to realize the new meaning of a new of existing product. Moreover, it should become meaningful to others, even though the new meaning may seem not satisfy the existing needs (Verganti, 2011).

One of the examples of technology epiphanies from cases researched is Sephora Color IQ service that is now available in Sephora locations around the world. Back in 2010 Pantone released its first Pantone CAPSURE color measuring devise, marketed to graphics designers, printers, and photographers and was never intended for beauty industry. While other beauty retailers were focused on providing as much choice as possible to their customers Sephora chose a different strategy. Instead of prioritizing brands they decided to concentrate on the customer and help consumers learn about their beauty. Collaborating with Pantone they adapted the CAPSURE to analyze clients' skin, provide perfect color match, and give skin insights through Sephora platform. Thanks to this technology the reason why people come to Sephora changed: now women come to learn about their skin and personalize their beauty routines. Moreover, the brand continues to apply customer centric technological innovation and created a true beauty hub inside the stores for consumers to connect around beauty.

When researching technology epiphany cases in retail it becomes clear that they are quite different from the common perception because epiphanies found in retail are related to services rather than products. Therefore, the designing process is also specific and needs to be investigated. In order to look into the development of technology epiphanies it is important, firstly, to cluster the information obtained from the companies and uncover directions that brands follow pursuing the strategy. Going back to DDI space there were identified 3 strategies: community hub, experience playground, and personalization, which represent diverse approaches. When new technologies get interpreted with respect to these new meanings epiphany cases appear that can be compared along various dimensions.

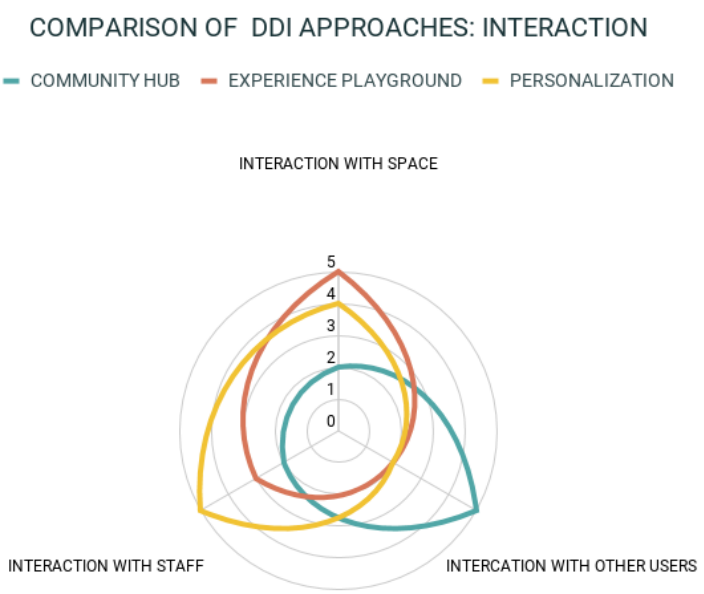

Figure 73. Comparison of strategies by interaction types

Since in-store experiences are gaining momentum at a high pace, interaction is one of the key aspects to consider (Fig. 73). According to previous researchers, experience in a physical store derives from an interaction between a customer and an experience provides, including moments of collaboration between them (Bustamante & Rubio, 2017). Precisely, customer experience arises when a potential customer comes in contact with products in the shop, the physical space of the retailer, or its personnel, adding a social component to the shopping experience. The social side of CX involves direct interactions between consumers and other people present in POS, them being salespersons or other customers alike. Moreover, growing amount of studies suggests that physical retail allows for outstanding possibilities of human interaction (Brocato et al., 2012; Hu and Jasper, 2006; Pan and Zinkhan, 2006). This characteristic of retail environments, according to Gentile et al. (2007) and Schmitt (1999), social experience, while the physical component of the CX entails shoppers' physiological reactions of their interaction with the space (Bitner, 1992).

Following this logic, we can see from the diagram, that all of the strategies are quite interactive but in different ways. The playground approach entails close immersion into the space, where consumers are faced with interactive surroundings which can be exhibited products, gaming elements, or technological innovations. Moreover, visitors are usually encouraged to follow storyline when walking around the store, even though some offer an

open space layout. As this concept is focused on creating connection between the space and the visitor it gives lower importance to fostering communication between users or staff members. In general, consumers should follow their individual journeys. On the other hand, community hub provides an environment in which users have a lot of freedom and feel excited to meet with friends or participate in public discussions. It is designed to be a place to socialize around different topics and life moments, weather it is a large group of people or a closed circle. Bringing people together is one of the goals of such retail environments. Finally, having a personalization station entail a lot of interaction as with the staff, as with the space. It is rare that a customization process is left completely on a customer without any guidance coming from a professional. So, the store's team plays a crucial role in this strategy, from technical help to maintaining a positive atmosphere and building relationships with clients. Certainly, tailor-made product creation entails also a deep interaction with the space because visitors participate in individual sessions, where they get a chance to choose materials, models, and even put together the final result.

In order to better distinguish the strategies, it is also possible to compare them across such dimensions as technology intensity, time, space, and customer journey stage involved (Fig. 74).

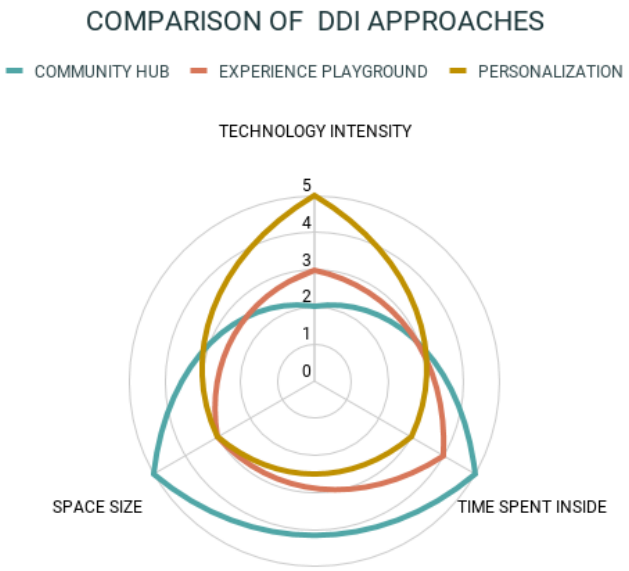

Figure 74. Comparison of strategies across time, technology, and space

As a way of generating meaningful environments for today's in-store consumers, retailers employ various approaches, many of which require a mix of several in-store elements. It also involves traditional aspects such as staff, layout, environment, design, availability and quality, but also new aspects, particularly in the form of new technologies (Bäckström & Johansson, 2017). In fact, very few stores deploy over three different types of digital technology, moreover, the amount of digital technologies used rises with the increase of the store size (Pantano & Vanucci, 2019). With respect to the amount of time shoppers spend in retail locations, it has been shown that enjoyable store experiences affect the time spent (Ballantine et al., 2015; Donovan et al 1994). As employment of new radical technologies is one of the fundamental characteristics of technology epiphanies it allows to evaluate how prone are the brands adopting community hub, experience playground, and personalization approaches to develop the epiphanies. As mentioned above, community hub stores are more oriented towards building social connections, so they less frequently feel the need to implement innovative technologies. Contrastingly, in order to allow consumers receive a personalized product or service in-store it almost always requires application of new technologies and their specific adaptation to become more user friendly. Analyzing the cases, it appears that the biggest stores are the one which adopt community hub approach. These brands dedicate entire buildings to the concept by making sure that there are enough open spaces to work and relax. Moreover, it is quite common to place fully functioning lecture halls inside with large screens and numerous seats. In general, innovative POS are bigger than traditional stores and try to make the most of that space. So, despite being smaller than community hubs, experience playgrounds and personalization centres are quite roomy. While there is a general trend towards micro-retailing (Gilliland, 2014), experiential sores, on the contrary, keep to the large format adding to customer experience and providing valuable insights (CSA, 2017). For example, in order to reach Feltrinelli's RED goals the space had to be large to incorporate both a restaurant, reading & work spaces. Passing from space to time dimension, it is clear that the more time people spend inside the better for the company. Therefore, companies pursuing community hub concept, such as Starbucks Reserve Roasteries, actually invite people to stay even all day without buying anything (Needleman, 2009,). So, essentially there is no time limit until when one may stay in-store, especially when community hubs offer computer stations and people can literally work from there. On the other hand, POS that are focused on customization provide a particular service that has an average session time, consequently,

customers spend a predetermined time slot at the store. If one wants to personalize a pair of Nike Air Force shoes in New York headquarters the session would last 60 minutes. Also Freitag Sweat Yourself experience would last from 30 minutes to maximum 1 hour. All in all, it is a time constrained experience, however, there is definitely stronger emotional connection and engagement with the brand. In between the 2 contrasting concepts time spent at a playground store can really fluctuate because in some cases, such as at Canada Goose's the Journey and Cooking Studio by Zwilling, there is a predefined scenario that is once completed doesn't leave much else to do. On the contrary, other businesses, such as CAMP and & L&T Sport House, create a more independent environment providing visitors with different ways of interaction and, therefore, more time to engage.

When most businesses concentrate on consumer experience, they mean touchpoints—individual interactions when consumers connect with areas of the firm and its products. It illustrates management and responsibility and is fairly easy to incorporate into operations. Companies are aiming to guarantee that consumers leave pleased with their experiences as they interact with their products, customer support, sales personnel, or advertising materials. Customer journey map depicts the customer's route from the time they are introduced to the company through the in-store experience, transaction and post-sale service. Building the map provides a high-level analysis of all touchpoints that connect users and businesses.

Figure 75. Comparison of strategies across customer journey

From its basic representation it is noteworthy that approaches to DDI differ by their role along customer journey (Fig. 75). The awareness stage includes the recognition of needs and the start of the hunt for a general answer to the need, as well as the recognition of the product, service and/or company. Companies who wish to start their relationship with consumers from their offline retail may consider experience playground concept, as it aims to immerse consumers into the brand through interactive experiences. Visitors, even those who have never purchased from the brand and don't have intentions to buy anything, get

acquainted with products and services though immersive participation or contemplation. Moreover, a lot of them do not even have an option of offline purchase but will provide home delivery. The next step is the phase of consideration. Potential clients have already done their preliminary research and are knowledgeable of some of the choices that they can choose from. So, at this point personalization can be a competitive advantage against competitors. With the help of customization centres users can adjust products to individual needs directly inside retail locations. Naturally, personalization is followed by purchase but the real value lies in a unique experience rather than the product made. Finally, advocacy is the last stage of the journey and is the most difficult one to achieve because customers should become active advocates for the company. Thanks to community hubs this step can be easier to achieve because they congregate people, who are often loyal customers, providing them with spaces to hang out, work, pass free time or participate in workshops, and they, in turn, are willing to spread the word and create buzz around the brand.

INNOVATION FRAMEWORK

One of the goals of this paper was to help companies who would like to engage in Technology Epiphanies and provide a clear path by identifying possible steps and alternatives. Unfortunately, even though the phenomenon of technology epiphany was defined and illustrated in previous research, little studies have attempted to develop a clear process companies could refer to, when employing technology epiphany strategy. Moreover, there is a limited field of literature regarding IoM or technology epiphanies in retail environment, so this work contributes to expanding the boundaries of knowledge by building a practical framework, based on a 5-step process to implement technology epiphany strategies of Buganza et al. (2015) (Fig. 76).

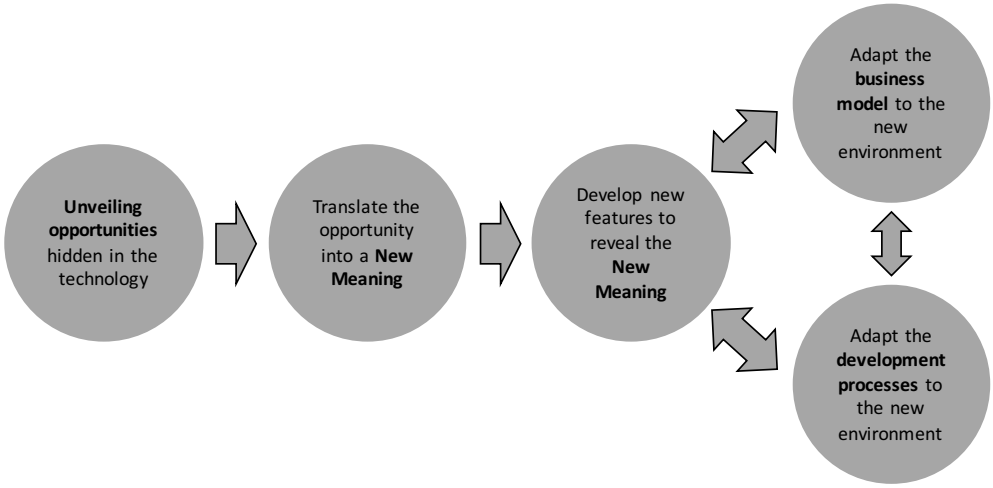

Figure 76. Process of Technology Epiphany implementation. Sourced from: Buganza et al., 2015

It is noteworthy to say that this framework is not universal and is related exclusively to company cases researched meaning that this process should be considered only by businesses for their physical retail strategies. Additionally, we cannot affirm that listed strategies represent a complete array of possibilities as the environmental conditions are constantly changing together with companies' strategies, so these options are especially suitable in the current context. It is noteworthy to say that not all of the steps of the process are explained in detail because the focus of this work is only on a part of the 5-step process (Fig. 77).

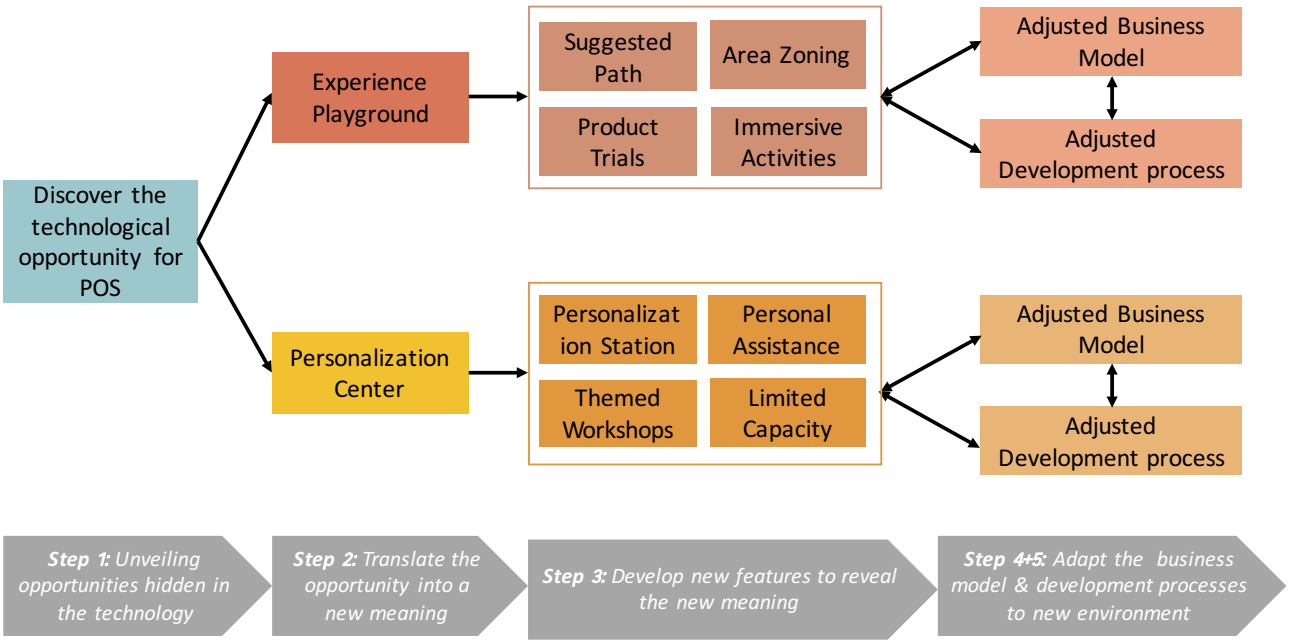

Figure 77. Technology epiphany development process in retail

Firstly, as you can notice from the chart there are only two strategic directions: only personalization centre and experience playground are included into the process. A decision to eliminate community hub concept was made as most of those cases did not entail the adoption of radical technological innovations. In fact, only Sephora and Samsung, from researched cases, managed to translate opportunities from new technologies into the new meanings. Such a tendency was quite predictable because the goal of community hubs is to get people together to communicate around a certain topic or brand. Therefore, there is no straight necessity in implementing new technologies to deliver this value to the visitors. In order to attract people to the place they just need, for instance, to create a welcoming atmosphere, dedicate space to lounge or working areas without VR technologies or RFID tags. It is undoubtedly true that some companies exceed these expectations, however, the majority does not follow technology epiphany strategy.

Now, it is possible to look through the 5 necessary steps that will enable a successful implementation of Technology Epiphany strategies in physical retail.

Step 1: Unveil opportunities hidden in the technology

In the very beginning, the first task is to understand what opportunities can be discovered inside new technologies. When companies look at the chosen technology just from a straightforward point of view, considering only its technical feature and performances, they will most likely end up with an incremental technological change and the same meaning or decide to abandon the technology being not useful (Buganza et al., 2015). However, technologies inhibit a lot of hidden opportunities that need to be uncovered and made sense of (Proni, 2007). Some of the technologies used by firms discussed include AR, wearables, 4K Laser Graphics, Beacon technologies, RFID technologies, and so on. Let's say that many of these technologies, even though being new, did not obtain their new meanings in retail, such as RFID tags, that first were used in military or wearable devices that before were used solely by professionals. It becomes clear that innovative technologies were new to the sector but had been invented before this application, however, the new meanings were uncovered and lead to Technology Epiphanies. So, it is very important to look into the new technologies available and figure out how the new meaning could be unveiled. For example, as Sephora did with a wearable device used by professional artists that determined exact shade of color of any surface. It discovered that the technology could be used to analyze women's skin and help them learn about their body. Summarizing, companies should always keep track of new technologies development and try to understand how they could be applicable to create new value for their customers.

Step2: Translate the opportunity into a new meaning

The next step is to actually translate the technological opportunity into a new meaning for the relevant industry. In order to grasp the new meaning, it's important to gain extensive knowledge of the market and of the existing meanings. Then the company should think about a new reason why people would come to their store, rather than just define a strategy how apply the new technology. One of the biggest differences is that the "why" comes from the inside of the company and then is followed by the "how", possibly involving external stakeholders. It is noteworthy to mention that it is difficult to define whether the new meaning is better than the older one because they are not incremental changes. Additionally, new meanings are generated to provide a unique strategic direction, that may reshape company's mission. In case of physical retail environments 2 new meanings, leading to epiphanies, can be uncovered: experience playground and personalization centre, which were described above. Both of them uncover new meanings in certain technologies and can

be applied by businesses depending on their goals. For example, if a firm wants to raise awareness and product trials the playground route would be suitable, while, if it decides to turn POS into places of co-creation then it should follow personalization direction. There is no definite preference among them, one is not superior to the other, however, the firm must understand what it is looking for and must work through the previous step to choose the best option.

Step 3: Develop new features to reveal the new meaning

After deciding on the new direction it is necessary to translate it to the users through a set of features. If the new meaning remains just a concept, it will not generate additional value to the customers, so it is indispensable to define ways to implement the new meaning. Certainly, these features must be specific to each meaning, that's why 2 sets of attributes were generated, corresponding to the 2 concepts.

In relation to Experience Playgrounds, there are 4 main features that are advised to be included into the design of the space: area zoning, suggested path, immersive activities, and product trials. Firstly, most stores divide their space into dedicated areas, whether quite distinctly with walls or with design elements, maintaining in each zone a special topic. Then it is useful to develop one or several possible paths that visitors will be invited to follow when going through these zones. If a company wants to make sure that every visitor receives the complete experience, it is important to direct their movements. This can be done with the help of indications inside the store of by providing people with printed or digital guidelines to follow. Additionally, interactions between the visitors and the space should be generated along their journey in order to make them feel as if they were going through an adventure. For instance, Ikea is a great example of creating interaction between a store and a customer, where consumers are encouraged to try out the furniture in real-life settings while following a predefined path. Subsequently, experience playgrounds motivate shoppers to experience their products, creating interactive atmosphere, sometimes at the end of the journey in a special section, sometimes during the session while being involved in particular activities.

When implementing personalization centre, it is important to design the space around co-creation, providing visitors with one of a kind experience. One of the essential elements is a personalization station, where customers will actually get to work on their creations. Interestingly, this station is usually positioned in the central part of the store with

a possibility to conduct several customization sessions at the same time, so that shoppers get to communicate. Another essential aspect is having a professional staff member assist consumers along the way, sometimes being actual designers rather that salespersons. Collaborating with professionals truly gives people feeling of being a part of the design process. Moreover, it is quite common that personalization centres conduct themed workshops dedicated to a particular event, designer or product accessible to loyal members which underline the exclusivity of the experience. Similarly, there is a limited capacity of people who can follow the same customization session, typically not exceeding 10 participants, so that they can receive individual help.

Steps 4 & 5: Adapt the business model and the development process to the new environment

The last two steps are also essential when developing technology epiphanies. Since new meanings alternate the direction of company strategies, especially in retail, it is necessary not only to develop a new store concept, but also to make sure that the process of change will be successfully inhibited in the organization. Therefore, existing business models and development processes will be ineffective under the new meaning and must be adjusted to the new reality. However, current work is focused on the previous steps, where it was important to give companies suggestions on the possible new meaning to establish while pursuing Technology Epiphanies. Additionally, business models and internal processes are very specific to every company, so it would not bring value to try and develop a universal approach to these particular stages (Fig. 77).

X. Conclusion

DISCUSSION AND IMPLICATIONS

With retailers passing a complex period due to changes in technology, environment, and global events, they get a chance to redefine themselves in the eyes of consumers. While customers, nowadays, dedicate a different role to physical retail as they tend to rely more and more on online shopping for purchasing various items, from everyday to luxury products. However, it is true that certain physical POS keep being popular but providing different experiences. Therefore, it becomes evident that physical retail has taken on additional roles rather than just sales. In addition, it raises concerns for production companies and retail intermediaries how to manage and adapt sales locations to fit the new reality.

Addressing those issues indicated above this research aimed identified as investigating how innovations in technology and meaning affect physical retail by exploring relevant theory and analyzing through its lens various cases or real stores examples. Moreover, the research also involved revealing innovation strategies that companies use while reinventing their POS and developing guidelines that could help other businesses to innovate.

With the help of such research methods, powered by secondary sources, as literature review, case analysis, and theoretical model application, various findings were derived. Firstly, IoM is a special kind of innovation that can be found across the globe in physical retail which is born from the change in purpose rather than new technologies or customer needs. In detail, three possible alternatives were revealed across the cases studied when applying IoM to sales locations. The first one named Community Hub encourages visitors to communicate with each other, engage in conversations and discussions around the brand. It can be applied when firms look for raising advocacy and post-sales engagement. It is worthy to notice that Community Hub frequently requires large open spaces as well as gives people opportunity to stay inside the location for as long as they desire. While the second type of approach, Personalization Centre, revolves around personalization of products. In this way consumers are closely engaged in co-creation process while usually being supervised by specialized staff members and treat the store as place to live the experience and creativity. In this case, there are limited time slots dedicated and a special zone designed to deliver the experience. Moreover, this strategy is the closest one to in-store purchase as products co-created are, naturally

acquired by the makers. Finally, the third strategy is dedicated to creating an interactive space where visitors have fun and perform exciting activities. Experience playground is quite popular among pop-up stores as well as dedicated permanent locations where the actual purchase of items is usually not possible because the purpose lays in raising customers awareness about the brands and their products. The key to making such a location is designing interactive environment so that visitors feel immersed.

Based on this, managerial guidelines were developed in order to assist businesses who would like to engage in technology epiphanies. As technology epiphany is a peculiar case of DDI, where IoM is combined with radical technological change, it proves to be more complicated to achieve from managerial and operational point of view. Consequently, a set of possible steps was developed which was adapted from Buganza et al. (2015) process towards Technology Epiphany to fit retail industry conditions. While the focus of the work is on the first three steps, consisting of unveiling opportunities hidden in the technology; translating the opportunity into a new meaning; and developing new features to reveal the new meaning, the last two steps are of the same importance and involve adapting the business model and the development process to the new environment. By following these steps, retailers will be able to reach technology epiphany that will allow them to maintain competitiveness in modern world.

It is noteworthy to mention that the process requires significant managerial effort, starting from the beginning. It is managers' role to detect the opportunities and to make sure that the strategy is being carried out across the organization. Moreover, management must make sure that the traditional business model is alternated so that it fits the chosen strategy and DDI concept. Not only the efforts of top and middle management are required, but also operational process changes are essential and should be supervised. Certainly, when mentioning managerial efforts, resource investments are also considered. In fact, since new strategies completely redesign a traditional store, a lot of time, financial, and intellectual resources will be needed to create new locations or rebuild the old ones. Consequently, such significant investments make these strategies bearable mostly for multinational companies with large budgets. On the other hand, corporate culture should be adapted to successfully reach the final goal. Not only physical investments but also the soft side of the process plays an important role. So, a culture driven by design thinking should be nurtured in the organization. In summary, establishing Technology Epiphany in retail is a complex,

multifaceted process which engages various actors and resources and provokes a fundamental change in the company.

SUGGESTIONS FOR FUTURE RESEARCH

Even though this research adds a new perspective on Technology Epiphany concept and on IoM, in general, and provides advice to businesses how to nurture them in retail environment, it definitely faces certain limitations, which were addressed in the dedicated chapter. Therefore, these challenges open up opportunities for further investigation of the topic.

For instance, due to time and resource constraints the number of real-life cases studied was not overly extensive, so including other examples would be definitely beneficial in the future. Moreover, additional variables could be collected to discover other point of comparison. By building on the range of cases and variables it would be compelling to perform an empirical study and predict possible profits that companies might gain from the strategies. With the help of data analysis, it would be possible to uncover hidden insights.

During the research, it became clear that retailers innovate from different parts of the world, from the USA to Japan, and come from a wide range of industries, from automotive to toys. Thus, conducting industry or market specific studies would be definitely beneficial to understand specific dynamics.

Finally, as mentioned before, the work expands on the first three steps of Technology Epiphany development, so it would be useful to investigate in detail how the changes in business model and processes are handled in this particular case.

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