

The International Innovations Journal of Applied Science



Journal homepage: https://iijas.eventsgate.org/iijas

ISSN: 3009-1853 (Online)

The Role of Digital Atmosphere Design in Shaping Consumer Behaviour in Commercial Spaces

Ola M. Mohammed Ahmed^{1*}

¹ Assistant Professor, Department of Design, Oman College of Management and Technology, Sultanate Oman. omohammed@ocmt.edu.om

ARTICLE INFO ABSTRACT Attractive commercial space design fosters economic and cultural transformation while Article history: driving technological innovation. The study analyses innovative methods for digital Received 1 Dec. 2024 atmospheres within commercial spaces. A digital atmosphere is vital for engaging Revised 20 Dec. 2024, customers in the retail experience. Interior designers create and innovate new concepts Accepted 27 Dec. 2024 to develop and transform traditional displays into fluid, advanced, dynamic display Available online 15 Mar. 2025 techniques. The study uses the analytical descriptive approach to collect facts, theories, Keywords: and information about the digital atmosphere, technology, and consumer behavior. The **Commercial Spaces** study's objective is to identify the digital elements that influence the shaping of Consumer Behavior designing display spaces. Hence, the significance of the study is to provide a vision of Digital Atmosphere the digital atmosphere and its role in expanding the horizons of customer thinking and behavior and introducing new concepts. Studying digital commercial design concepts Interior Design gives interior designers the tools to craft unique experiences. Therefore, the study is Technology based on the impact of digital atmosphere design on consumer behavior in commercial spaces through the power of digital design to transform the concepts and trends of unconventional displays. The interior designer shall design creative and attractive environments, creating immersive experiences that inspire consumer engagement and new ideas in retail design. The research concludes a strong correlation between consumer behavior factors and digital atmosphere designs in commercial spaces.

1. Introduction

Designers have recently used the aesthetics of retail environments in the interior design of commercial facilities to enhance the engagement of customers. In display spaces, technology becomes a critical element of consumer attraction. The research examines how digital environments influence consumer behavior and retail space design, as the design of stores and shopping showrooms is a unique branch of architecture and interior design, which in imagination takes center stage. The new shaping of retail spaces was developed as part of the change, which encompasses integrating technology and consumer interaction within space. As a result, interior designers tend to envision the needs of consumers to stimulate store design. Today, shoppers seek exciting experiences and charming atmospheres that combine pleasure and functionality. In recent years, there has been a growing interest in designing store interiors to evoke specific emotions in customers. This may be crucial in

* Corresponding author.

This work is licensed under a Creative Commons Attribution 4.0 International License.

E-mail address: omohammed@ocmt.edu.om

improving the influence on the purchasing process. The designer had to use his imagination to re-formulate and shape the space and create the illusion of transforming the entire commercial space into a digital world of bold, innovative ideas in design for fun and transforming it into a scenario for future design that expresses an exciting and attractive world. The product is no longer the only purpose of the visit when retail spaces have become a marketplace to meet social needs, exchange knowledge, learn, and explore. Therefore, the research provides the critical elements for designers that profoundly impacted the development of retail and society and the leveraging of technology in designing the atmosphere of retail stores.

2. Research Problem

The research addresses the challenge of creating innovative, non-standard retail spaces by integrating technology and enabling new space planning, circulation, and consumer engagement approaches. In addition, studying the atmosphere of retail space with technology will help achieve all these requirements and control consumer behavior. Because the main challenge is to incorporate different experiences and atmospheres to clients that enable them to figure out the spaces and stay more, the technology and digital atmosphere can envision all these issues.



Figure. (1) Illustrates an interactive display window that attracts shoppers. (Ibnet, 2012)

3. Research Objectives

This study examines how digital environments, such as interactive displays and lighting, affect shopper behavior, emotional responses, and movement patterns within retail spaces.

4. Research Significance

The research provides an innovative perspective on technology and how it can broaden our perspectives by introducing novel ideas and atmosphere. It depends on digital thought in the design field, which allows designers to use it as a creative tool to create unique worlds in display spaces. The design of appealing commercial spaces is a powerful motivator for economic and

cultural transformation and technological innovations. It is unique and innovative, and it is a dynamic space. The research highlights the significance of involving digital elements in space that influence the creation and shaping of present-day visions and the design of future scenarios. All these strategies will create different shopping experiences for consumers in commercial spaces.

5. Research Hypotheses

This research hypothesizes that integrating advanced digital technologies into retail design will significantly influence consumer behavior and enhance engagement, ultimately shaping future trends in retail space design.

6. Research Limits

The research limits are determined by the existence of a correlation between the factors affecting consumer behavior and the design of the atmosphere surrounding the commercial space.

7. Research Methodology

This research studies the impact of digital environment design on consumer behavior within commercial spaces through the power of [digital design]. It considers studying digital environments as a turning point in the concepts and trends of non-traditional and nonstereotypical display spaces. The research involves new strategies in digital thinking and the creation of future trends in design to reach a different vision in designing retail spaces.

8. A Theoretical Framework for Research

8.1 Digital Environments in Commercial Spaces

The research studies the relationship digital atmosphere of the between the commercial environment and consumer behavior. Numerous scientific studies and designers have examined how the commercial environment affects consumer behavior. The most significant findings of these studies were as following strategies: (Kotler, 1973)

	1: Different strategies for designing the here of commercial spaces. (Kotler, 1973)
First	1. The commercial space environment
	can influence consumer behavior
	when purchasing a product or service.

Second	2.	The commercial space environment can influence various outcomes and performance. It is an essential input for consumers when storing images, products, and services and deciding to stay. The atmosphere of commercial space stimuli can affect consumers' emotional states and trigger emotional and sentimental responses.
Third	3.	The commercial space environment is a multidimensional structure: Academic literature shows that many physical elements of interior space design, including music, lighting, color, and technology, can influence consumer responses.

One of the most significant recent developments in retail thinking is recognizing that the audience makes the purchasing decision. Shoppers respond not only to the tangible product or service, which is only a tiny part of the total consumption package, but to the which includes product, services. total advertising, financing, images, and other accompany features that the product. Commercial space is one of the most essential features of a product. Space is the most specific of the surrounding environments and is more influential than the product in purchasing decisions. In some cases, the atmosphere surrounding the space is the primary product. (Kotler, 1973)

8.1.1 Retail Technology Solutions and Retail Experience

Retail technology solutions are available for designers and brands wanting to integrate technology into their stores or product offerings. Retail technology solutions are the future of shopping, with modern offerings that simplify the shopping process for customers and make the environment more productive for everyone. From self-service terminals to points of interest and sale, retail technology offerings powerfully enhance the shopping experience. Consumer expectations changed have over time. Consumers are now searching for a more straightforward, personalized event; the results display retail technology options. The core of retail technology solutions is interaction. (ksf-global, 2024)



Figure. (2) Illustrates the different tools used in retail design. (ksf-global, 2024)

Easy browsing will lead to higher levels of customer satisfaction and better customer retention in the future. By making all parts of the shopping process more accessible, including ordering a product and comparing similar products. This will simplify the store's functionality and improve visitors' browsing experience. It will create an improved, more cohesive aesthetic, resulting in better first impressions and a more enjoyable shopping journey. Incorporating the latest technological advances enhances the accessibility of point-ofsale and self-service systems. The research provides trusted and popular retail technology solutions for retail spaces of all scales and sizes. All retail technology products are manufactured to meet consumers' needs. (ksf-global, 2024)

8.1.2 Controlling Consumer Behavior Through Interactive Retail Technology

The next evolution in advertising for retail environments is interactive retail displays. With the ability to display visually appealing images, graphics, and videos that can be rolled out worldwide throughout retail outlets, the marketing possibilities for interactive retail displays are endless for controlling consumer behavior in the store. (ksf-global, 2024)

Technology applications open up a new world of advertising and marketing concepts. Interactive retail displays offer several innovative features, such as the following: (ksf-global, 2024)

- Personalizing advertising campaigns that can be dynamically changed to highlight recent events, updates, and more relevant consumer advertising.
- Controlling any visible advertising display across all stores to play music, display targeted ads, and more.
- Increasing analytics of customer footsteps using proximity sensors and facial recognition to track engagement and trigger events to promote crossselling.
- Offering a globally connected platform that can be monitored on the go and complete control over advertising campaigns across countless screens worldwide.

The International Innovations Journal of Applied Science (IIJAS) Vol. 2, No.1, 15-03-2025 المجلد الثاني العدد الاول 2025-3-2025 (IIJAS) مجلة ابتكارات الدولية للعلوم التطبيقية <u>https://doi.org/10.61856/n3ax8870</u>

• Interacting with customers that allows to track, evaluate, and edit any media campaigns in real-time. Interactive retail displays provide a versatile way to advertise and are fully adaptable to stores, malls, theaters, and other commercial spaces.

8.1.3 Digital Tools in Retail Design

- Interactive signage and touchscreen displays provide customer engagement and streamlined in-store experiences. (ksf-global, 2024)
- Touchscreen solutions can be used across various applications, from interactive digital signage displays to interactive kiosks that allow shoppers to complete purchases without the assistance of a salesperson. (ksf-global, 2024)





Figure. (3) (4) Illustrates an interactive display in the store's design. (ksf-global, 2024)

8.1.4 Technology and Shopper Engagement

A window display defines an intuitive customer path. It introduces the brand and piques interest in a welcoming, interactive moment via the "My Skin Scanner." (Design4retail, 2024) The store's interior design has allowed enough space to incorporate interactive touch screens within the display for greater customer engagement.





Figure. (5) (6) Illustrates involving consumers through interior design. (Design4retail, 2024)



Figure (7) Illustrates the interior design of a Cannabotech store that motivates the consumer to figure out space. (Design4retail, 2024)



Figure. (8) Illustrates store design that is welcoming and appealing to all shoppers. The space balances the brand's scientific and natural aspects, focusing on consumer well-being. (Design4retail, 2024)

It features a mushroom-inspired tone, green hints, gold accents, luxurious textures, translucent materials, and scientific digital elements. (Design4retail, 2024)





Figure (9) (10) Illustrates various experiments and experiences that visualize consumers' journeys through technology. (Design4retail, 2024)

8.2 Atmosphere Design in Retail Environment

The atmosphere of a store environment is encountered through the senses; therefore, it can be described in terms of sensory factors. The atmosphere has been redefined as [ambient factors]. (Kotler, 1973) Many factors cause the atmosphere of spaces to be aroused, including light, which is used to evoke emotions and create brand identity. It can stimulate the tendency to purchase and increase sales. (Zumtobel, 2015) Technology and lighting can also be integrated into the commercial design to encourage shoppers to wander and explore the displays.

8.2.1 Emotional Influence on Shopper Behavior and Creating Digital Atmospheres

Creating specific atmospheres in retail environments aims to cause specific emotional effects on the consumer. (Hoffman, Turley, & practice, 2002) Emotions are essential factors in various consumer behaviors. More specifically, purchasing behavior and aspects of the atmosphere can influence buying behavior through the intervention of emotions in shoppers in all retail stores and contribute to driving sales. (Kenhove, Desrumaux, & Research, 1997)





Figure (11) (12) Illustrates the various engagement applications customers can use in the store.
8.2.2 The Surrounding Atmosphere Affects Consumer Behavior

The surrounding atmosphere significantly influences consumer behavior. According to Kotler (1973), the atmosphere can impact purchasing decisions through three main strategies: (Kotler, 1973)

Table 2:	Stra	tegies of consumer behavior. (Kotler, 1973)
First	1.	The atmosphere can create interest.
		Therefore, the designer may use
		colors, sounds, and movement to make
		the establishment stand out.
Second	2.	The surrounding atmosphere may
		create a message expressing the brand
		and activating shoppers' stimuli.
Third	3.	The surrounding atmosphere may
		influence behavior through colors,
		sounds, and textures, eliciting direct

reactions that contribute positively to
the likelihood of purchase and help transform behavioral intentions into
actual purchase behavior.

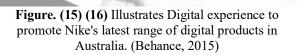
8.2.3 Consumer Behavior in Commercial Atmosphere

There is a strong connection between how the consumer perceives the atmosphere of the commercial space in terms of warmth, activity, and vitality and how the consumer reacts emotionally to this atmosphere in terms of pleasure, excitement, aesthetic environment, and dimensions of the atmosphere of the interior space. Pleasure increases when the perceived warmth and vitality increase. Retail stores aim to provide an experience that captivates the mind and enchants the senses through visual, verbal, and mental stimuli.



Figure. (13) (14) Illustrates Nike Tech Pack Lab store in Australia 2015. (Behance, 2015)





8.2.4 The Journey of Digital Technology in Retail Space Design

Digital technology within retail spaces represents shopper enjoyment and engagement, allowing shoppers to be digitally connected at every point in their journey. Technology cannot be assumed to be the solution to all retail problems. Still, the digital experiences that shoppers experience within the space have a significant impact on challenging many of the obstacles that retail has faced. (Coreyyurkovich, 2012)





Figure (17) (18) Illustrates Nike's innovative digital presentation, designed by Brazilian artists who translated their style into this presentation. (Behance, 2012)

8.3 Digital Revolution in Retail Design

Today, retail is undergoing structural changes. Consumer buying behaviors constantly evolve; technology has allowed consumers to take advantage of this change. Therefore, the designer must innovate in creating a shopping experience that distinguishes the brand and increases sales. (Retailbiz, 2012) Technological progress is accelerating today, a phenomenon that can significantly improve the quality of life.

New technologies are claimed to have created a new category of experience that has surpassed the restrictions imposed on the classical concepts of space and time. Technology is thought to be performance and solutions to problems before it is just equipment acquisition. As a result of technical and technological development and the emergence of many technological ideas, designers need to integrate advanced technology to open new paths in commercial design, attract shoppers, and enhance their participation.





Figure. (19) (20) Illustrates HSBC Retail's interactive window display using QR codes in England to attract more clients. (Isnglobal, 2014) (032Design, 2015)

Additionally, the study explores new directions of augmented reality technology for consumer interaction with digital elements within the retail space. It examines how retail designers can deploy technology in new ways to expand customer touchpoints and achieve revolutionary excellence in marketing and customer service. For instance, HSBC Retail uses augmented reality technology to enhance shopper interaction in retail spaces, such as through interactive window displays using QR codes in England (Figure (21) (22).





Figure. (21) (22) Illustrates interactive displays provide a new shopping experience. (Achrekar, 2018)

8.3.1 The Next Revolution in Retail Technology

Today's designers face some of the industry's most challenging issues, from fundamentally changing how consumers shop to dramatically increasing expectations for service and pricing. Addressing these issues requires a new way of thinking and a new way of marketing.

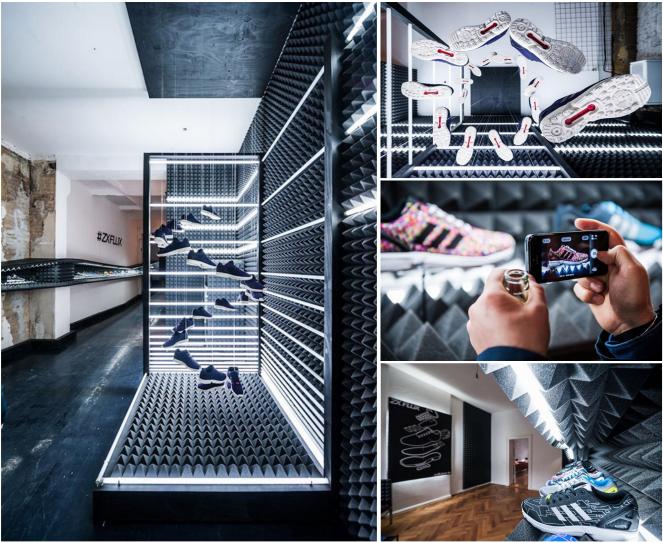


Figure. (23) (24) (25) (26) Illustrates ADIDAS ORIGINALS ZX FLUX exhibition in Berlin, Germany, in 2014. The brand applied several elements of modern display units while maintaining classic silhouettes. The design goal was to capture the concepts behind the Adidas brand approach. (Freshnessmag, 2014)

8.3.2 The Evolution of Consumer with Technology

Digital retail solutions help expand and enrich the ability to engage with customers inside and outside a retail store. (Supernaturedesign, 2015)





Figure. (27) (28) Illustrates interior shots of the intelligent LunarElite Nike store, which showcases the design of a fun and engaging shopping experience. (Cargocollective, 2014)



Figure. (29) (30) (31) (32) Illustrates interactive attractions through foot interaction to attract fun experiences instead of fixed POS technology (Cargocollective, 2014)



Figure. (33) (34) Illustrates drawings of the interactive circular space and the nature of this design. (Cargocollective, 2014)



Figure (35) (36) illustrates how the intelligent shoe uses its voice to communicate its benefits to customers. (Cargocollective, 2014)

An interactive store design that encourages consumers to walk around and respond to their feet during in-store interactions is a powerful sales driver. It creates an engaging, interactive experience that engagingly demonstrates the technology product.

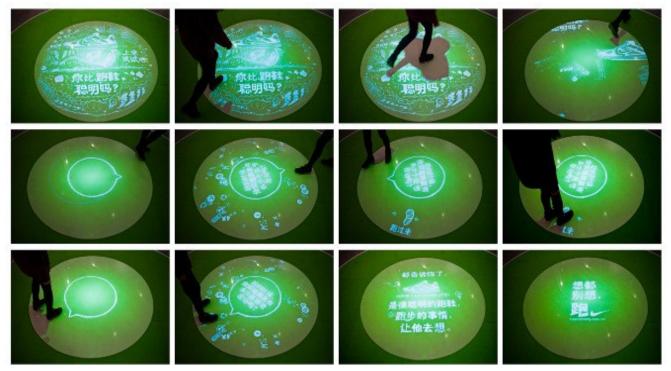


Figure. (37) Illustrates creating an interactive experience in the store to challenge consumers to know their feet when interacting with it (Cargocollective, 2014)

8.3.3 Technological Display Strategies

The development of technology, in all its forms, has direct and lasting effects on

commercial design and is considered one of the leading forces shaping the competitive environment. Using advanced techniques and technology in commercial spaces has recently contributed to improving promotional processes and increasing sales rates through technological display methods.





Figure. (38) (39) Illustrates the most innovative retail experience in Australia, if not the world, was created during the Olympic Games, and the energy around the brand was created. Interactive digital displays and the unique design of the NIKE brand combine physical and digital innovation with the latest interactive technology. (Behance, 2014b)





Figure. (40) (41) Illustrates technology in-store design that is moving towards more specific elements of the shopping experience. (Behance, 2014b)

8.3.4 Technological Environment in Retail Design

Technological advancement is one of the significant factors determining the design of retail spaces. Technology development is a design tool that establishes the interaction between the consumer and the products in a fun experience through interactive display units, touch screens, and video walls. Visitors are encouraged to take photos and share them using social media. (Retaildesignblog, 2015)



Figure. (42) (42) Illustrates a simple design store with white and plywood colors and focuses on technology experience. (Retaildesignblog, 2015)

H.M



Figure. (43) (44) Illustrates how the store design aims to communicate with customers and encourage them to learn more through media content and interaction in the display. (Retaildesignblog, 2015)

8.3.5 The Joy of Shopping Through Technology

The Asian Paints store uses fun, interactive displays to engage customers with the brand and teach them how to use the product. Although the store does not sell paint, its design has helped increase overall sales by 35%. (Fitch, 2014) At the entrance, a "Color Cloud" lighting display with colored floor panels attracts customers. Shoppers can change the color of the "cloud" and the entire storefront. Asian Paints (AP) is one of the largest paint companies in the world. The store wanted to sell more than just quality colored paint. The Store Color with Asian Paints was designed by Fitch in 2011 in India.



Figure (45) Illustrates how store design encourages customers to explore and make choices without selling a single paint pot. (Fitch, 2014)



The International Innovations Journal of Applied Science (IIJAS) Vol. 2, No.1, 15-03-2025 المجلد الثاني العدد الاول 15-3-2025 (IIJAS) مجلة ابتكارات الدولية للعلوم التطبيقية <u>https://doi.org/10.61856/n3ax8870</u>

Figures (46) (47) (48) (49) Illustrate that the store aims to enhance customer confidence in color by offering separate centers of expertise for customers to dream and explore their home color choices. (Fitch, 2014)



Figure. (50) (51) (52) (53) Illustrates 2,700-square-foot space dedicated to the experience of color. The design creates a dynamic of color and shadow at the entrance, which directly relates to the store's color theme and leads visitors into the space. (Fitch, 2014)



Figure. (54) (55) Illustrates clients who lack confidence with color, explore possibilities, learn new things, and, after helping, narrow down their choices and explore design themes in a series of experiments, resulting in a more engaging experience. (Fitch, 2014)



Figure. (56) Illustrates the store design based on a world of colors and takes visitors on a fun journey. It is the first to provide solutions for global color types. (Fitch, 2014)

8.3.6 Color as An Exciting Entry Point to Store Through Technology

The new stores offer an inspiring, educational color experience to provide interactive, personalized solutions. The layout adopts an editorial approach, presenting products within life contexts with easy-tounderstand choices, recommendations, top tips, and the latest decor trends. (Fitch, 2014)



Figure. (57) Illustrates From a full range of color cubes, shoppers can visualize their ideas in a virtual room on the screen. (Fitch, 2014)



Figure (58) Illustrates digital technology in the store that enables customers to seamlessly capture and collect their experiences throughout the store on a fun, engaging, and purposeful journey. Inspired by Holi, a Hindu festival of colors, the focal point of this Indian paint color store is the "Color Cloud." Each is connected to a central control and motion sensor that changes as customers change color choices. (Fitch, 2014)

8.3.7 The Shopper's Journey Through Store Technology

This technology model has worked well for the past thirty years. The requirements have changed as consumers have rapidly adopted technology connected to the World Wide Web, most notably "smart" mobile phones. For consumers today, the ability to start and end their shopping experience digitally or augment their in-store experience with digital phones is essential. Shoppers use the digital realm to confirm their purchasing decisions, and they expect the store to have that information at their fingertips to serve them better.



Figure. (59) Illustrates using different applications of technology in design stores. (Linkedin, 2019)



Figure. (60) Illustrates Intel's augmented reality digital display Intel's holographic. (Nusca, 2010)

8.3.8 Integrating Augmented Reality Technology into Retail Space Design

By using augmented reality technology, shoppers can interact with each product individually. Consumers can:

- Use curated digital content to uncover information and interactivity tailored to each product.
- View technology as a catalyst.
- Invest in new technology and processes.

8.4 Embracing Future Retail Design

The retail scene rapidly evolves, and innovative technology is at the forefront. The future of retail, embracing innovative technology, is the foundation for retail space design to achieve a bright, connected, customercentric destination. (LIMITED, 2023)

The study fosters designers to embrace comprehensive technology solutions to: (Linkedin, 2019)

- 1. Meet today's consumer expectations.
- 2. Prepare to respond to changing desires.
- 3. Anticipate future consumer demands.
- 4. Set new standards in the retail experience.
- 5. Connect the future and technology.

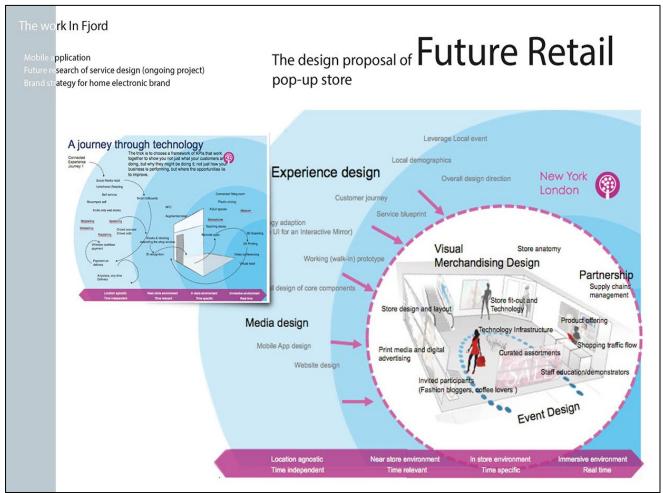


Figure. (61) Illustrates design proposal for future retail pop-up stores. (Behance, 2014a)

9. Results

The core of retail technology solutions is interaction and harnessing the power of intelligent retail spaces. The research focused on impact of digital atmosphere the and environment design on consumer behavior within retail spaces to represent a turning point in the concepts and trends of non-traditional display spaces. The retail industry is evolving rapidly, and intelligent technology is at the forefront of this development. The power of innovative retail spaces can be harnessed. The future of retail, embracing innovative technology, is the foundation of retail space design to reach a creative, connected, and customer-centric destination. The study explored innovative digital thinking strategies to shape retail design trends in shaping customer behavior. Retail stores aim to provide an experience that captivates the mind and fascinates the senses through digital stimuli. Digital technology allows customers to capture and enjoy their experiences throughout the store easily; shoppers can visualize their ideas in the commercial space. Shopper enjoyment and engagement are embodied through digital technology within retail spaces, allowing shoppers to be digitally connected at every point throughout the shopper's journey. Finally, the research demonstrated the link between how the consumer perceives the atmosphere of the commercial space in terms of warmth, activity, and vitality and the consumer's emotional response to these digital atmospheres while exploring the space.

10. Discussion and Conclusions

Technology and lighting can also be integrated into the commercial design to encourage shoppers to wander and explore the displays. Retail technology solutions are the future of shopping. With modern offerings that simplify the shopping process for customers and make the environment more productive for everyone, retail technology offerings have a powerful impact on enhancing the shopping experience. The research has demonstrated the relationship between retail environment design and consumer behavior. Many designers have investigated the effects of the retail environment on consumer behavior. Retail technology offerings have a powerful impact on enhancing the shopping experience. Interactive store design that encourages consumers to interact is a powerful attraction that drives sales. It creates an interactive experience at the engagement level that enjoyably demonstrates the technological product. The development of technology is a design tool that establishes the interaction between consumers and products in a fun experience. Digital elements can carry the and philosophy thought of advanced commercial design to go beyond the usual in spaces characterized by unique creativity. In conclusion. the research concluded that technological advancements are the most essential key factors determining the design of retail spaces. The study focuses on how the surrounding atmosphere in space affects purchasing behavior in different strategies. Consequently, visitors are motivated to try products, test them, and get inspired by advanced technology.

11. References

- 032Design. (2015). Creative, inspiring experiences. Retrieved from http://www.032designltd.com/
- Achrekar, S. (2018). Retail Technology for the Near Future. Retrieved from https://www.textronic.com/blog/retail_innovatio ns in near future/
- Behance. (2012). EXPO NIKE AIR FORCE. Retrieved from

https://www.behance.net/gallery/6306983/EXP O-NIKE-AIR-FORCE-1

- Behance. (2014a). Design proposal of Future retail popup store. Retrieved from https://www.behance.net/
- Behance. (2014b). NIKE +NINE. Retrieved from https://www.behance.net/gallery/18702989/NIK E-NINE
- Behance. (2015). Nike Tech Pack Lab. Retrieved from https://www.behance.net/
- Cargocollective. (2014). Nike LunarElite Retrieved from http://cargocollective.com/yehenala/filter/retaildesign.
- Coreyyurkovich. (2012). Digital Retail. Retrieved from http://coreyyurkovich.com/Tech-Pack
- Design4retail. (2024). Cannabotech. Retrieved from https://www.design4retail.co.uk
- Fitch. (2014). The joy of shopping. Retrieved from http://www.fitch.com/the-joy-of-shopping-its-all-in-the-mind/
- Freshnessmag. (2014). Adidas. Retrieved from http://www.freshnessmag.com/2014/01/16/adid as-originals-zx-flux-berlin-launch-party-eventrecap/
- Hoffman, K. D., Turley, L. W. J. J. O. M. t., & practice. (2002). Atmospherics and consumer decision. 10(3), 33-47, https://doi.org/10.1080/10696679.2002.115019 18.
- Ibnet. (2012). Interactive Retail Display.
- Kenhove, P. V., Desrumaux, P. J. T. I. R. o. R., Distribution, & Research, C. (1997). Retail environment. 7(4), 351-368, https://doi.org/10.1080/095939697342932.
- Kotler, P. J. J. o. r. (1973). Atmospherics as a Marketing Tool. 49(4), 48-64, http://belzludovic.free.fr/nolwenn/Kotler%20-%20Atmospherics%20as%20a%20marketing% 20tool%20%20(cité%20171)%20-%201973.pdf
- ksf-global. (2024). Retail Technology Solutions. Retrieved from https://www.ksf-global.com
- LIMITED, I. (2023). Retail Spaces. Retrieved from https://www.linkedin.com
- Linkedin. (2019). Technology in Retail. Retrieved from https://www.linkedin.com
- lsnglobal. (2014). Technology in Retail. Retrieved from https://www.lsnglobal.com
- Nusca, A. (2010). Retail Future. Retrieved from http://www.zdnet.com/

- Retailbiz. (2012). Innovation. Retrieved from http://www.retailbiz.com.au
 Retaildesignblog. (2015). Stores. Retrieved from http://retaildesignblog.net/
 Supernaturedesign. (2015). Nike. Retrieved from http://www.supernaturedesign.com
- Zumtobel. (2015). Presentation. Retrieved from http://www.zumtobel.com