

***Collaborative Hospitality Design Study Linking Academia and Industry:
Understanding the Shifts in Guests' Preferences for Innovative Design Models***

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Abstract

The hospitality sector is facing considerable transformation leading to changes in guests' needs. According to studies, innovative design solutions are in demand for distinctive experiences. This investigation identifies current hospitality guests' expectations for advanced design responses. Several data validate the research including the results of the Hospitality Design Challenge incorporated in a design course at the American University in Dubai. Being the competition conceived in collaboration with a relevant Hospitality Operator, the implications of interrelating academic and professional practice in the learning experience are explored.

The qualitative and quantitative study comprises:

- Design senior and junior undergraduate students' development of their design concepts for an innovative guestroom, the scope of the annual challenge. The design process involves research, case-study analysis, surveys, and professional juries. The competition was conducted for six editions, involving 109 individuals.
- Assessment and comparison of results and data, observations, interviews, and literature review, including a supplementary questionnaire during the COVID-19-related period.

The findings on current trends in guests' needs highlight a focus on well-being, accessibility, biophilia, authenticity, space flexibility and multifunctionality, sustainability, and technology integration. Responsive conceptual design models are elaborated. Experiential learning has proved crucial in supporting innovation, meeting industry demands, and student engagement. Furthermore, despite the reciprocity of Academia and Industry collaboration, the lack of resources may be a limitation. The research offers insights into the evolution of the Hospitality Design field for educators, future designers, and industry stakeholders, contributing to the sector's advancement.

Keywords: Hospitality Design, Innovative Design, Experiential Learning, Active Learning, Design

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Introduction

The Hospitality Design field comprehends the design of functional and accessible spaces for hotels, restaurants, and all the hospitality-related areas. It is an essential component of the commercial design industry. Being a multidisciplinary sector, it includes several other disciplines such as lighting design, MEP, architecture, contract design.

In addition, it is an extremely dynamic area, subject to rapid advancements and modifications mainly due to the high level of competition. The field is subject to pivotal transformations affecting the whole sector and, subsequently, the operational aspects along with the design and use of space. The reasons for these changes are diverse, including the increasing sophistication and diversification of guests' needs. Economic, cultural and social transformations due to recent events such as the global pandemic, the fast-technological advancement, the shift in general priorities and, as a result, the adoption of new behaviors, contribute to the modifications of guests' needs. The focus shifted towards new requirements related to the hospitality experience. The growing research for authenticity and link with the location, along with additional privacy and personalization, the integration of technology, innovation, and the rising of awareness on sustainable aspects, are just few of the sensitive directions driving the guests' preferences and leading to innovative design responses.

Understanding the guests' needs and trends is crucial for the sector's success. Designers have an extremely important role in addressing the market, the industry and the guests' expectations through design, anticipating future changes.

The study focuses on the shifts in guests' preferences through the years for the identification of current and future design trends. The research also examines the importance of Academia and Industry collaboration for students, educators and academia, industry, and the overall Hospitality Design field. The collaborative design challenge developed by the Interior Design Department at American University in Dubai and Rotana Hotel Operator is a key component of this study.

Background & Context

1. Brief Historical Evolution of Hospitality and Hospitality Design

The Hospitality concept as we intend nowadays is relatively recent; origins of commercial-related activities can be found going back to the ancient civilizations of Greece and the Roman Empire (O'Gorman, 2009).

Initially, the development of such activities was principally linked to the main trade and army routes. The activities were purely related to travelers' fulfilment of necessities, with usually shared accommodations where the practicality was the priority and comfort had minor relevance.

Following, other structures received travelers, like the monasteries. Taverns and inns became popular, providing affordable shelter. With the expansion of the infrastructures' network due to the introduction of new and fast transportation means such as the train, more lands and city became accessible. The transportation of goods intensified and expanded, with the consequence of an increase in movement and a rising demand for additional passengers and travelers' accommodations.

According to O'Gorman, Hospitality was a primary feature in the development of the societies that have been considered. It is an essential part of human existence, especially as it deals with basic human needs (food, drink, shelter, and security) (O'Gorman, 2005).

Grand Hotels and the concept of hospitality industry developed around the 18th and 19th Centuries in Europe (Denby, 2002). These structures were luxuriously designed for their wealthy guests. Later on, modernity embraced minimalism, focusing on design simplicity and service, balancing the experience in terms of aesthetics, functionality, and fulfillment of needs. The 20th Century sees then the definition of Boutique Hotels, offering unique experiences.

This quick overview highlights the continuous evolution of the hospitality sector where an increasing market segmentation generates diversification of the hospitality offers in terms of experience and design.

2. Transformation of the Hospitality Sector & Responses of the Hospitality Design Field

As mentioned, in the past years the sector witnessed rapid transformations. These changes are reflected in guests' expectations.

Sustainability is increasingly linked to hospitality and hospitality design. Studies suggest that a range of factors help to explain this trend: to comply with the growing volume of environmental and social regulations within many jurisdictions; concerns over the scarcity of natural resources; increased public awareness of the growing importance of environmentally and socially consciousness; growing media coverage; brand strategies (Jones, Hillier, & Comfort, 2016). In terms of hospitality design, the integration of biophilic design and eco-friendly practices is a current trend. The guests are informed about the topic, resulting in the corresponding requests for hospitality experience where sustainable and environmentally friendly practices are implemented.

Technology integration is becoming a requirement in the sector, not only for the adjustments in the work environment due to the use of technologies, but because it is increasingly part of the daily life. Advancement in innovative technologies is a fast process. Smart rooms, implementation of Internet of Things (IoT) and Augmented Reality (AR), Artificial Intelligence (AI) and Virtual Reality (VR), contactless services... are all expected elements of immersive and innovative hospitality experiences.

Privacy concerns due to the increasing number of sensors and IoT/IoE installed around hotels consider that technological advancement will lead to more efficient and profitable hotels in the future (Leung, 2021).

Another important aspect in hotel design is to increase the flexibility of hotel features to offer hotel guests greater control over their temporary homes based on their needs and wants. "Customization" is the key term in hospitality that represents this type of flexibility (Lo, 2010).

3. Hospitality Sector and Hospitality Design in the UAE

Despite being a relatively recent Nation, constituted in 1971, the United Arabs Emirates (UAE) are a well-known touristic hub in the Middle East, extremely attractive due to stability

and geographic location. The Country is known for its multiculturalism and strong identity. According to Mordor Intelligence Research & Advisory, it had a fast-post-pandemic recovery rate in the hospitality field, with a constant growth (Mordor Intelligence Research & Advisory, 2024).

The UAE Hospitality Industry is diversifying its offer and strongly implementing both sustainability and technology in the experiences. The market is very competitive, considering the recent rise of the Kingdom of Saudi Arabia as a touristic destination. It is a dynamic sector, fast in modifications and adaptation to demands, open to the adoption of innovative and pioneering solutions.

The sector is ground-breaking in integrating technologies into design, demonstrating a shift towards digitalization.

The overall commitment to digital transformation and sustainability has not left the hospitality and tourism industry untouched. Like its peers in other regions, the industry has had to rapidly adapt to the changes brought about by the pandemic by embracing innovation (Nadkarni & Haider, 2022). Ultimately, the hospitality design in the UAE embraces modern trends and cultural identity, highlighting the elements of its rich heritage.

4. Guests Expectations

Amongst the several theories and methodologies focusing on the definition and measurement of guests' expectation, the SERVQUAL is one of the most commonly used. It is a multiple-item scale measuring consumer perceptions of service quality (Parasuraman, Zeithaml, & Berry, 1988).

The perceived physical environment does not directly influence guest experience but is indirectly shaped through the sensory, affective, cognitive, social and behavioral responses the environment elicits in the visitor (Gavilan, & Al-shboul, 2023).

A memorable experience occurs when emotions are involved along with the satisfaction of needs and expectations. Several Guest Centered methods consider guests at the center of the design and the design process. Involving them during the design progression, such as in testing or through experience-related observations, supports the designer and the design itself.

As consumers become increasingly connected, their expectations, preferences, and behaviors are also evolving. The result is more informed and empowered consumers. As favorite apps and networks evolve to personalize engagement, the standards for guest experiences rise. This behavior will only continue to advance (Solis, Li, & Szymanski, 2014).

Technology integration through continuous connectivity and integration of technology pre-during- and post- experience became normalized in the past years and is included in the current expectations.

Guest centric approaches support design. In view of the fast changes in the field, experts must not only anticipate future needs but also exceed guest expectations for the success of the field.

5. Collaboration Academia and Industry in the Hospitality Design

In recent times, Academia and Industry have increased their collaboration in various forms. This partnership is increasingly evident and beneficial for both parties. Students are exposed early to market and industry demands for better training and preparation in view of their next career step. Industry contributes in nurturing young talents, leading to access to the workforce. Since the hospitality sector is experiencing rapid and continuous changes, collaboration with academia supports the development of the sector in terms of research and investigation of innovative and effective solutions. These advancements are reflected in the hospitality design field.

Professionals collaborating in the learning experience contribute to students' knowledge, and the refinement of their skills. The initiatives, such as real-life projects developed in class, create professional practice opportunities, resulting in effective learning outcomes.

These kinds of activities have impact on different stages of the teaching-learning process and dissimilar influence on students' acquisition of knowledge, abilities and professional skills (Lantada, Morgado, Muñoz-Guijosa, Sanz, Otero, García... & Ochoa, 2013).

These partnerships, in several forms:

- Support the process of bridging Academia and Industry, interlinking theoretical knowledge and practical skills;
- Support research and innovation useful for both sides and the general field;
- Support the development and identification of innovative teaching methods and active learning;
- Improve the overall learning experience, usually generating motivation and interest, building important professional networks and connections, better preparing students for their next professional step;
- Support the Academia and the improvement of academic programs;
- Support the Industry;
- Enhance design practice and research on sustainability;
- Promote inclusion;
- Often generate internships and employment opportunities.

Purpose of the Study

In examining the ongoing transformation of the Hospitality Market and Industry, the study focuses on identifying trends in guests' needs.

Detecting key elements in guests' perceptions supports the Hospitality Design field and the designers in fulfilling their expectations. It also facilitates the designers and architects themselves in the design process for effective outcomes.

The research identifies the design patterns for the definition of design models implementing recurrent trends, through six years of study and cross-examining multiple design solutions.

The study analyzes a real-base project's impact on the learning experience reflected in the student's performances and supports the definition of innovative active-learning methodologies.

Method

The investigation has been developed at the American University in Dubai, Interior Design Department, CIDA (Council for Interior Design Accreditation) accredited Department, in Dubai, United Arab Emirates. CIDA is an independent, non-profit accrediting organization for Interior Design Education Programs at colleges and universities in the United States and internationally.

It is validated by the **#Hotel REgeneration Student Design Challenge** multiple annual editions shaped by Prof. Lambri in collaboration with **Rotana Hotels**, one of the major Hotel Operator of the Region and internationally. It has been developed in the Interior Design course Hospitality Design for six years, offered every Spring semester from 2018/19 to 2024. It mainly involved junior undergraduate interior design students for a total of 109 individuals. All participants voluntarily contributed to the study. Students received detailed information and acknowledged their participation.

Table 1: # Hotel REgeneration Design Challenge Participants' Profile

Variables	Categories	Frequency	Percent %
Year	2024	24	22
	2023	25	23
	2022	16	15
	2021	19	17
	2020	15	14
	2019	10	9
	<i>Total</i>		<i>109</i>
Academic Level	Junior	109	100

The qualitative and quantitative study comprises two phases:

- The development of design concepts for an innovative guestroom, which is the scope of the annual challenge with the support of Rotana Hotels, partners in the Design Challenge initiative.
 - This portion of the study includes research and analysis, design process, case-study analysis, surveys, and data collection. Professional international juries are also involved.
 - The competition, also named *Design Atelier*, follows Guest-Centric Design approach. It challenges students' creativity to envision an innovative design concept. The aim is to analyze, study and develop the concept and the operational aspects in a post-pandemic scenario, envisioning an innovative *Hotel Guestroom/Suite-System*.
 - Key elements of the Challenge are: Flexible spaces, Diversification and Space Flexibility, Well-being, Sustainability, Innovative solutions.
 - It reached its 6th successful edition, becoming well-liked amongst the students for its topic and the consisting development in terms of contents and outcomes.
 - International Professionals of the field of Hospitality are involved in the process through critique sessions, lectures and as jury Members selecting the winners of the challenge. The Rotana Hotels team contributes along with the professor in periodic revisions and dedicated workshops.
- The second part of the study has been elaborated by the faculty and includes assessment and comparison of results and data, observations, interviews, and literature review, along with an additional questionnaire conducted during the COVID-19-related period.

- A specific focus has also been given to pre- and post-pandemic implications, particularly in terms of guests' needs and expectations along with students' perspective as young generation of designers and guests. The analysis has been conducted in consideration of the advancement of the Hospitality field and the impact of this experiential learning experience on students.

Findings, Discussion & Models

The results highlight essential elements to be considered for a successful guest's experience.

Components like well-being, accessibility, biophilia, authenticity, space flexibility and multi-functionality, personalization, sustainability, and technology integration resulted relevant in guests' expectations.

Based on these findings and the analysis of innovative layouts and design solution developed during the Design Challenge, responsive design models have been formulated, mapping design references for current and future implementation.

In addition, the #Hotel REgeneration Student Design Challenge, being an interesting example of collaboration Academia and Industry, demonstrated the benefits of a direct connection with the industry for undergraduate students, facilitating the overall learning experience and supporting students' pro-activeness. Students involved in the challenge demonstrated an exceptional interest in the topic and a strong commitment, along with enthusiasm and a positive attitude at all stages of the design process. Therefore, outcomes demonstrate interesting design solutions.

A professional experience in the hospitality sector is highly regarded by potential field-related employers, facilitating internship and employment opportunities. Experiential learning proves to be instrumental in promoting innovation, addressing industry demands, and student participation.

Findings: Survey

The Survey was conducted in the Hospitality Design class 2024 involving twenty-four undergraduate Interior Design junior level students. A few graphics:

1. Identification Current Trends in Hospitality Design

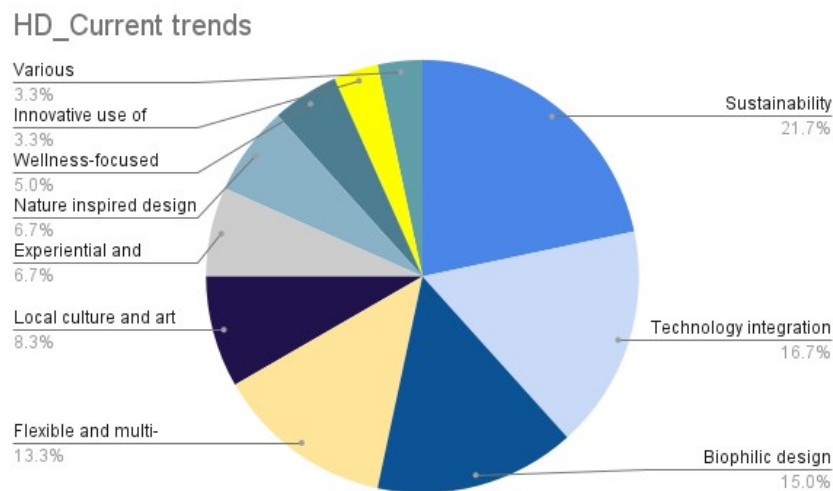


Figure 1: HD Current Trends

Table 2: Survey

Sustainability	21.7%
Technology integration	16.7%
Biophilic design	15.0%
Flexible and multi-Functional/modular spaces	13.3%
Local culture and art-inspired design	8.3%
Experiential and unique experience	6.7%
Nature inspired design	6.7%
Wellness-focused experience	5.0%
Innovative use of materials	3.3%
Various	3.3%

2. The Role of Sustainability in Shaping Hospitality Design Trends

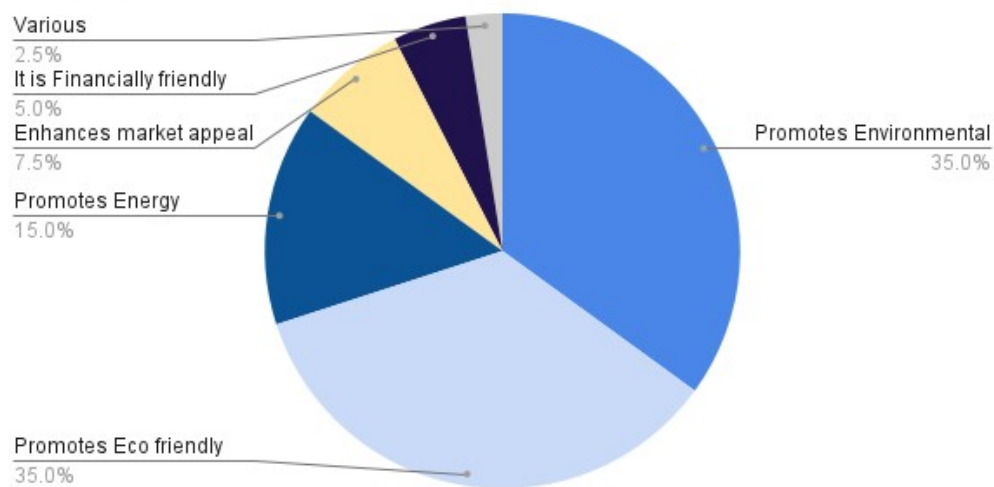


Figure 2: Sustainability in Shaping Hospitality Design Trends

Table 3: Survey

Promotes Environmental consciousness and impact	35.0%
Promotes Eco-friendly practices and Resource efficiency	35.0%
Promotes Energy efficiency	15.0%
Enhances market appeal	7.5%
It is Financially friendly	5.0%

3. The Role of Technology/AI/VR in Shaping Hospitality Design Trends

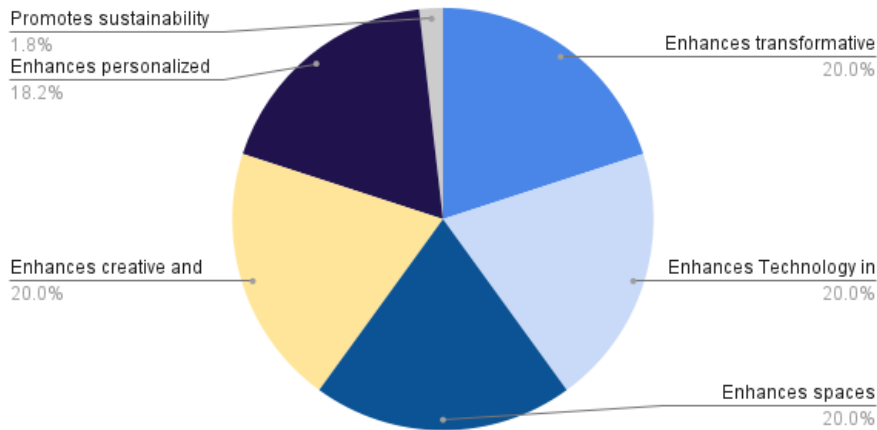


Figure 3: Technology/AI/VR in Shaping Hospitality Design Trends

Table 4: Survey

Enhances transformative and immersive experience	20.0%
Enhances Technology in the experience	20.0%
Enhances space innovation and efficiency	20.0%
Enhances creative and unique design	20.0%
Enhances personalized and human-scale experience	18.2%
Promotes sustainability	1.8%

4. The Role of Nature in Shaping Hospitality Design Trends

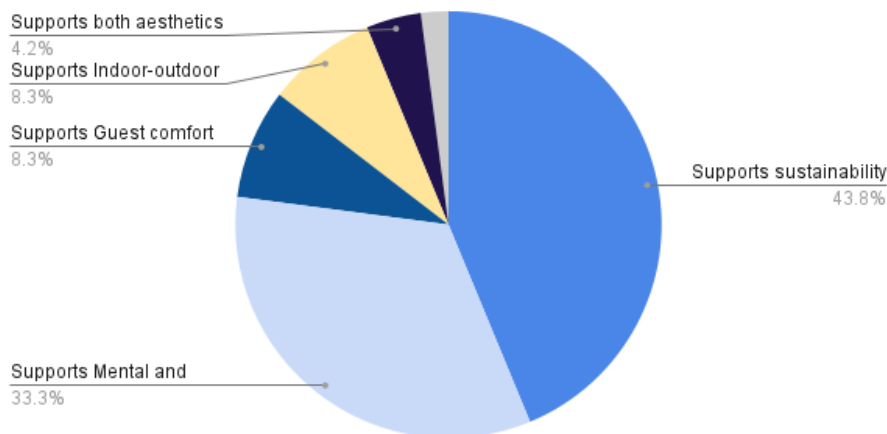


Figure 4: Nature in Shaping Hospitality Design Trends

Table 5: Survey

Supports sustainability and Biophilic design	43.8%
Supports Mental and physical well-being	33.3%
Supports Guest comfort and sensory experience	8.3%
Supports Indoor-outdoor connectivity	8.3%
Supports both aesthetics and functionality	4.2%
Various	2.1%

Survey Findings Conclusions

Participants, resulted mainly informed about hospitality design trends through online sources.

- Current trends in hospitality design are identified in: Sustainability; Technology integration; biophilic design; Flexible and multi-Functional/modular spaces.
- Incorporating modern design trends enhances the guest experience mainly in terms of Aesthetics and visual appeal; Comfort and Ergonomics; Functionality.
- The role of Sustainability in shaping hospitality design trends is mainly identified in: The Promotion Environmental consciousness and impact; The Promotion of Eco-friendly practices; Resource efficiency.
- The role of **technology/AI/VR** in shaping hospitality design trends, mainly: Enhances transformative and immersive experience; Enhances Technology in the experience; Enhances space innovation and efficiency; Enhances creative and unique design.
- The role of **nature** in the hospitality design field, mainly: Supports sustainability and Biophilic design; Supports Mental and physical well-being.
- **Shifts in guest preferences** are mainly identified in: Wellness and Health demand; Flexible spaces allowing to fulfil different needs; Technology integration.
- Main challenges designers face in the implementation of new design trends in hospitality projects: Budget constraints; Balance innovation and functionality.
- Hospitality design trends differences across various regions are identified in: Cultural influences; Climate considerations.
- Main shift in the perception of hospitality for the guests after COVID-19 in: Emphasis on Health and Safety concerns and measures; Emphasis on Hygiene priorities and standards.

Findings: Elaboration Data (six years) #Hotel Regeneration Challenge

1. Design Choices–Theme

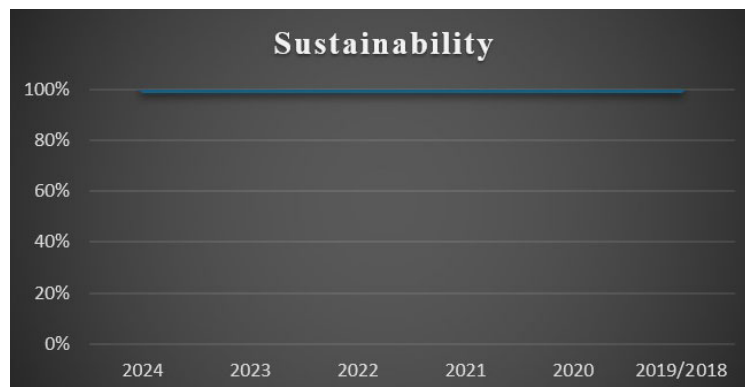


Figure 5: Sustainability

Table 6: Design Choices. Theme Sustainability

2024	100%
2023	100%
2022	100%
2021	100%
2020	100%
2019/2018	100%

2. Design Choices-Theme

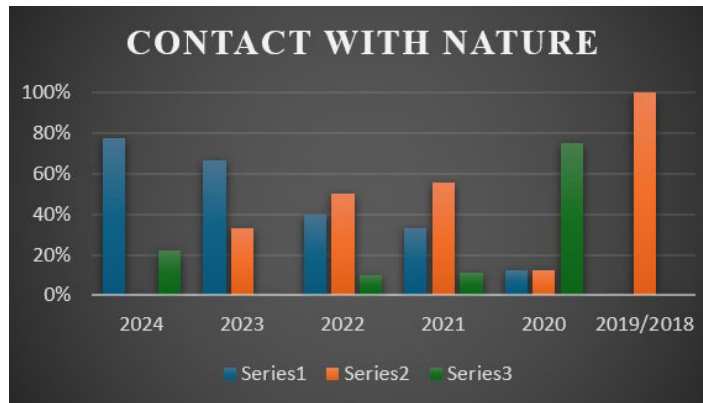


Figure 6: Contact With Nature

Table 7: Design Choices. Theme Contact With Nature

	1 Specific location	2 City location to requalify	3 Unspecific location/adaptable to different locations/movable/modularity
2024	78%	0%	22%
2023	67%	0%	33%
2022	33%	11%	56%
2021	33%	11%	56%
2020	13%	75%	12%
2019/2018	0%	100%	0%

3. Design Choices-Theme

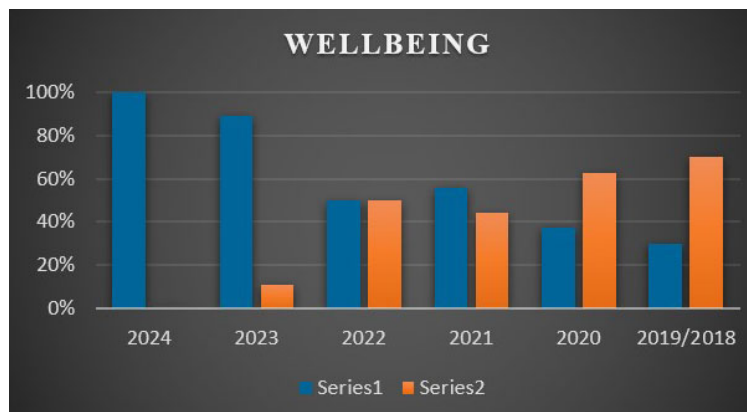


Figure 7: Well-being

Table 8: Design Choices. Theme Well-being

	1 Body and mind wellness activities <i>*Physical activities, Contact with nature, Art-related activities.</i>	2 NOT specified wellness-related activities
2024	100%	100%
2023	89%	11%
2022	50%	50%
2021	56%	44%
2020	38%	62%
2019/2018	30%	70%

4. Design Suite/Guest Room

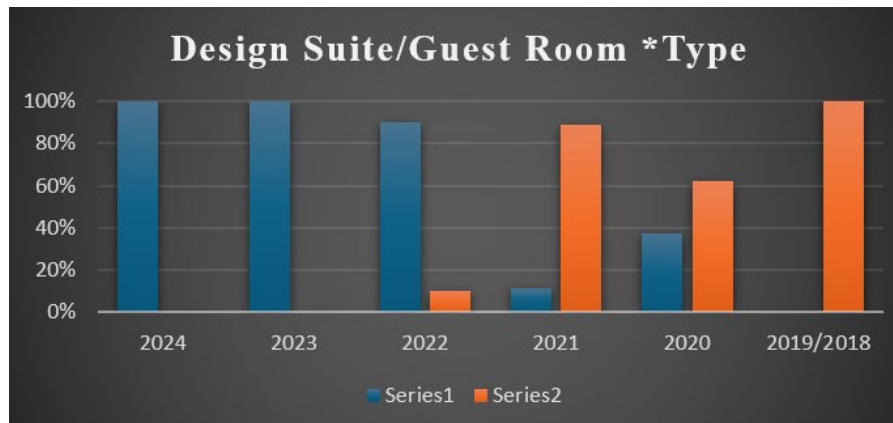


Figure 8: Design Suite/Guest Room

Table 9: Individual Structure or Part of the Hotel's Main Structure

	1 Individual	2 Part of the hotel's main structure
2024	100%	0%
2023	100%	0%
2022	90%	10%
2021	11%	89%
2020	38%	62%
2019/2018	0%	100%

Data Findings Conclusions

Observations elaborated from data:

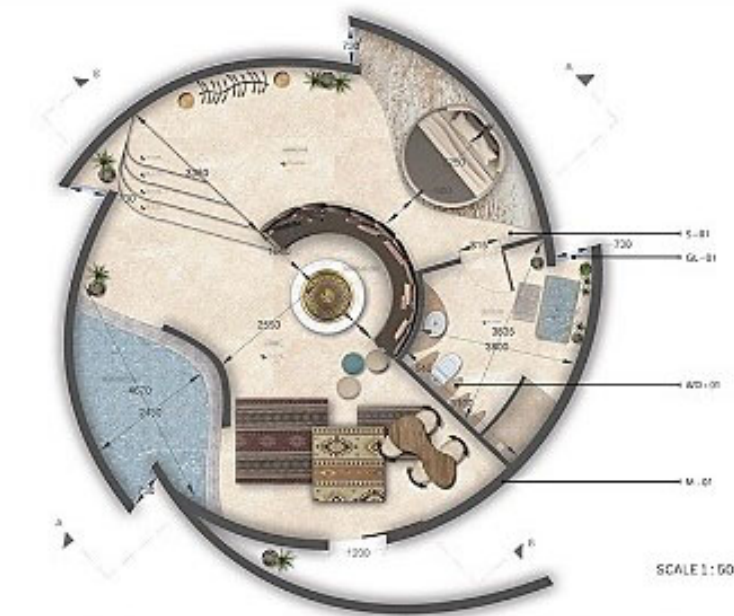
- Relevance of sustainability: all projects **100% applied sustainable Design Principles** through the years.
- **The need and research of contact with nature is currently extremely relevant.** Noticed a progressive shift thought the years: in 2018 projects have been mainly located in cities (100%), in 2024 the 78% of the participants preferred to locate their projects in a specific site in contact with nature.

- **Current focus on well-being in several forms such as physical, mental, spiritual, social.** Noticed a progressive shift thought the years: in 2018 projects did NOT specified wellness-related activities (70%) while in 2024 Body and Mind wellness-related activities are extremely relevant and included in all projects (100%).
- **Design Suite/Guest room: current preference for privacy and personalization given by an individual structure,** such as lodges, chalet or villa, not included in the main hospitality building. Noticed a progressive shift thought the years: in 2018 all projects were part of a main structure (100%), in 2024 all projects have an individual structure (100%).
- **Architectural Typology: new structure or re-qualification of existing building.** Except for 2018 where was given relevance to requalification of existing structures, through the years it has been noticed the predominant preference in new structures till 2024 (100%). **This result highlights the preference on the personalization of the experience.**
- **Target–Noticed the constant identification of a specific target.** Interesting the increase of specific categories such as art lovers, sport-related guests, nature lovers, along with mainly sustainability supporters and itinerant tourists.
- **Type of experience and location; preferred destination location.** In 2018 for all projects the location was extremely important (100%), currently reduced to 78% but still relevant, such as UAE, Saudi Arabia. **Noticed an increment in Adaptable or Modular solutions.**

*All projects with constant connectivity, technology integration, offered activities, innovative solutions and the option for remote working.

Findings: Models

Model 1. Earthen Retreat, Saudi Arabia





Figures 9, 10: Earthen Retreat, Saudi Arabia
 Credits –Project by Afra Al Suwaidi, Mehak Minocha, Sameya Masroof Ahmed
 Mentor Prof. A. Lambri.

Main Elements:

- Authenticity: link to the territory and natural environment, Art lovers.
- Well-being, accessibility, Flexibility and Personalization.
- Space flexibility and multi-functionality.
- Sustainability: 3D printed project.
- Technology integration.

Model 2. Falls, Modular Project, Adaptable

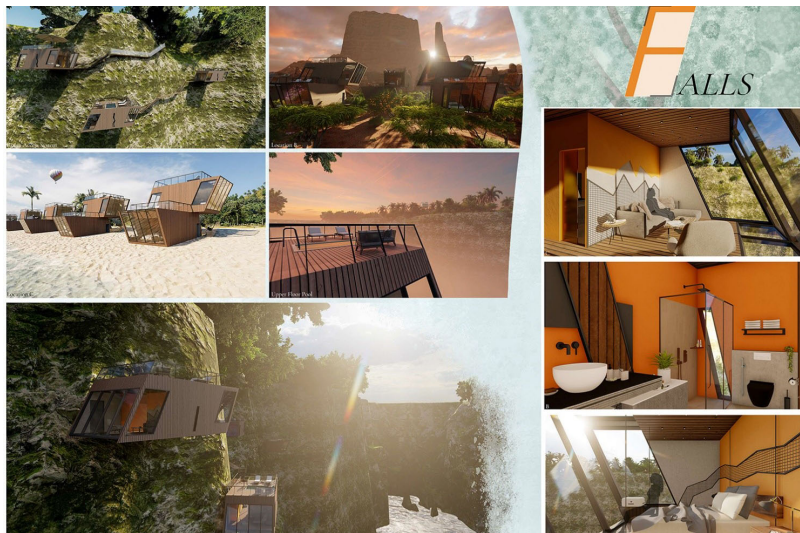


Figure 11: Falls, Modular Project, Adaptability
 Credits – Project by Dalin Abubaker. Mentor Prof. A. Lambri

Main Elements:

- Modularity. Adaptability.
- Well-being, Accessibility, Flexibility and Personalization.
- Space flexibility and multi-functionality.

- Sustainability.
- Contact with nature.
- Technology integration.

Model 3. Yugen, Modular Project, Adaptable



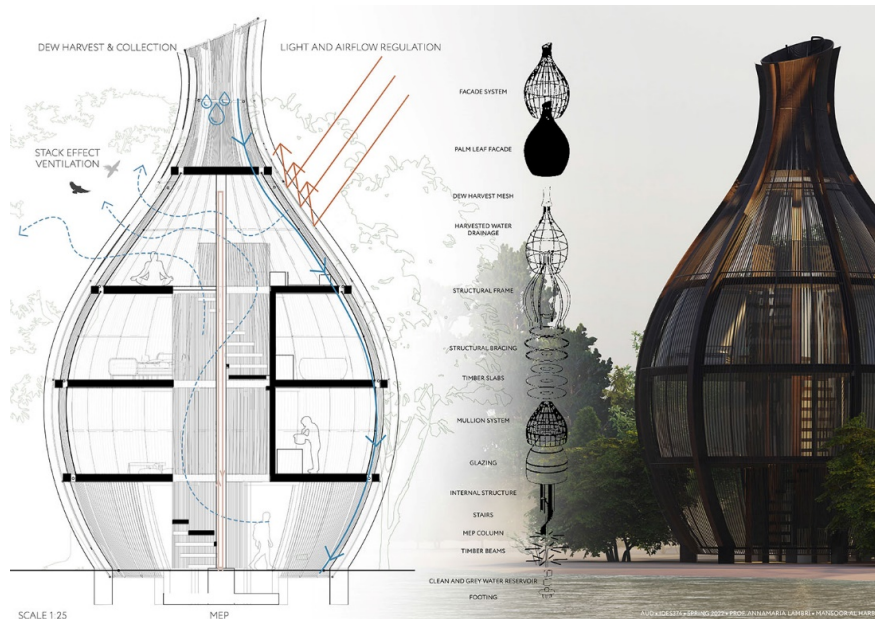
Figure 12: Yugen, Modular Project, Adaptability
Credits – Project by Lana Shadid, Nouf Al Doseri. Mentor Prof. A. Lambri

Main Elements:

- Modularity. Adaptability.
- Well-being, Accessibility, Flexibility and Personalization. Physical Activity – climbing.
- Space flexibility and multi-functionality.
- Sustainability.
- Contact with nature.
- Technology integration.

Model 4. Areesh Retreat, UAE





Figures 13, 14: Areesh Retreat, UAE

Credits – Project by Mansoor Al Harbi. Mentor Prof. A. Lambri

Main Elements:

- Modularity. Adaptability.
- Well-being, Accessibility, Flexibility and Personalization.
- Space flexibility and multi-functionality.
- Sustainability. Self-sustainable.
- Contact with nature. Biophilia.
- Technology integration.

Conclusions

The study highlights the following components to be included in design as an expression of guests' expectations:

- Well-being;
- Accessibility and personalization;
- Contact with nature and biophilia;
- Sustainability;
- Authenticity and identity;
- Space flexibility and multi-functionality along with modularity;
- Technology integration.

The major shift in expectations was observed as a post-pandemic impact. Due to the period's limitations (both physical and emotional), individuals reprioritized their needs, particularly in terms of personalization of the experience, contact with nature and an increase research of well-being-related initiatives. Individuals demonstrate their preference for flexible spaces adaptable to needs.

The research highlights the importance of the collaboration Academia and Industry for the definition of effective learning experiences and innovative teaching methods. Furthermore, Experiential Learning generates students' engagement and enthusiasm, enhancing creativity. Although limitation could be experienced in terms of Academic or Industry constrains, the

commitment with the industry is beneficial for their future careers and supports our role as Interior Design professionals and educators in preparing students for entry-level work.

Ultimately, a successful Academia and Industry partnership supports innovative solutions, and effective design responses to guests' changes in needs.

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All students of AUD Interior Design Hospitality Design course and:

- Model 1. Earthen Retreat, Saudi Arabia. Credits - Project by Afra Al Suwaidi, Mehak Minocha, Sameya Masroof Ahmed.
- Model 2. Falls. Credits - Project by Dalin Abubaker.
- Model 3. Yugen. Credits - Project by Lana Shadid, Nouf Al Doseri.
- Model 4. Areesh Retreat, UAE. Credits - Project by Mansoor Al Harbi.

References

- Al-Hamadi, A., et al. (2020). *Sustainability Practices in UAE Hospitality Design*. Journal of Sustainable Tourism.
- Almurbati, N. (2020, November). Hybrid heritage in hospitality interiors as an evident of cultural sustainability. In *2020 Second International Sustainability and Resilience Conference: Technology and Innovation in Building Designs (51154)* (pp. 1-6). IEEE.
- Alsuwaidi, F., Sabri, R., & Belpoliti, V. (2021, November). Investigating the Values of Modern Architectural Heritage in Dubai, UAE. In *IOP Conference Series: Materials Science and Engineering* (Vol. 1203, No. 2, p. 022056). IOP Publishing.
- Denby, E. (2002). *Grand hotels: reality and illusion*. Reaktion Books.
- Gavilan, D., & A. Al-shboul, O. A. (2023). Designing innovation in urban hotels through guest experience data on interior design. *European Journal of Innovation Management*.
- Jones, P., Hillier, D., & Comfort, D. (2016). Sustainability in the hospitality industry: Some personal reflections on corporate challenges and research agendas. *International Journal of Contemporary Hospitality Management*, 28(1), 36-67.
<https://doi.org/10.1108/IJCHM-11-2014-0572>
- Lantada, A. D., Morgado, P. L., Muñoz-Guijosa, J. M., Sanz, J. L. M., Otero, J. E., García, J. M., ... & Ochoa, E. (2013). Study of collaboration activities between academia and industry for improving the teaching-learning process. *International Journal of Engineering Education*, 29(5), 1059-67.
- Leung, R. (2021). Hospitality technology progress towards intelligent buildings: a perspective article. *Tourism Review*, 76(1), 69-73.
- Lo, K. P. Y. (2010). Emotional design for hotel stay experiences: Research on guest emotions and design opportunities.
- Mordor Intelligence Research & Advisory. (2024, April). Hospitality Industry in UAE Size & Share Analysis - Growth Trends & Forecasts (2024 - 2029). Mordor Intelligence. Retrieved October 14, 2024, from <https://www.mordorintelligence.com/industry-reports/hospitality-industry-in-the-united-arab-emirates>
- Nadkarni, S., & Haider, I. (2022). Digital transformation, operational efficiency and sustainability: innovation drivers for hospitality's rebound in the United Arab Emirates. *Worldwide Hospitality and Tourism Themes*, 14(6), 572-578.
- O'Gorman, K. D. (2005). Modern hospitality: Lessons from the past. *Journal of Hospitality and Tourism Management*, 12(2), 141-151.
- O'Gorman, K. D. (2009). Origins of the commercial hospitality industry: from the fanciful to factual. *International Journal of Contemporary Hospitality Management*, 21(7), 777-790.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.

Solis, B., Li, C., & Szymanski, J. (2014). Digital transformation. *Accessed on, 25*.

Vij, M., & Rizwan, S. A. (2022). Emerging Technologies in Tourism for a Better Experience: The Case of Dubai. *Technology Application in Tourism in Asia: Innovations, Theories and Practices*, 97-107.

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