This doesn’t look like the pictures: an investigation of the use of visual and augmented reality technologies in the real estate industry.

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The real estate industry is in constant adaptation to the latest technologies of the modern time, especially technologies that would assist in the progression of the business. It was only a matter of time before virtual, and augmented reality technologies became contributing factors to the success of the sector. Those technologies are today being incorporated, more than ever, in the Real Estate industry because developers claim that they can provide an efficient means of visualizing, marketing and selling of a real estate project. This is done through filling in the imagination gap in the real estate market by enabling investors and home buyers to visualize the result of an on-plan project and to imagine how a piece of real estate will look after being built, refurbished or emptied.

This research questions if virtual and augmented reality technologies can revolutionize the real estate industry. Could such technologies solve questions related to the famous “this doesn’t look like the pictures” struggle in the real estate world? Through semi-structured interviews, the research considers the role of real estate developers as users of these technologies and explores the contribution of providers of those technologies to
the revolutionization of the real estate sector. An empirical study of the use of virtual and augmented reality within the real estate sector in Bahrain has been conducted with seven main user organizations and three suppliers. Emerging patterns of use were explored, and an analytic framework was developed to investigate the challenges and constraints of the available technology, and the influence it has on the real estate market in Bahrain. The study gives feedback on the effectiveness of these technologies in the real estate sector, particularly in enabling better visualization and facilitating higher sales.

**Keywords:** Virtual Reality, Augmented Reality, Real Estate, Technology, Bahrain.

*Author(s) Biography (200 words each):*

Ms. Amna Al-Aseeri is a fourth-year undergraduate student, undertaking her Bachelor's degree in Architecture at the University of Bahrain. Ms. AlAseeri graduated from Al Hidd Secondary Girls' school with excellence. She participated in many sports’ teams as well as the school’s weekly newspaper. Ms. AlAseeri had the opportunity to train at Dheya Tawfiqi Engineering Consultancy Bureau -a very well known local Architecture firm- in the summer of 2017. She also worked at the Ministry of Culture in the spring break of 2018. Ms. Amna found herself interested in culture and heritage when it comes to architecture. She continues to develop her software skills by taking private courses and working on projects that are not related to her university studies. In the future, Ms. Al-Aseeri aims to expand her horizon and curate exhibitions and events. She also aspires to explore the design of unique furniture pieces and garments.

Ms. Afra Al-Sowaidi is an architecture undergraduate student at the University of Bahrain. She aspires to become an architect and have her own architectural office in the near future. Ms. Afra graduated in 2014 from Hawar International School with honors. She was the class valedictorian and received a plaque of excellence. Ms. Al-Sowaidi participated in many activities and competitions in arts, sciences, and sports. To name a few, she won the first place in an art competition in 2007 organized by her school. She also received a first-place plaque at the Central Governorate Art Competition in 2008. Ms. Al-Sowaidi also participated in the Young Leadership Program hosted by AlHekma school in 2011.

Ms. Ala’a Janahi is a fourth-year undergraduate student studying Architecture at the University of Bahrain. She is following her dream to become an architect. Ms. Janahi’s primary objective in life is to join an esteemed university where she can fulfill her career objectives after completing her higher studies. Through her designs, Ms. Janahi hopes to influence the local community positively. She is interested in social sciences and technology. To improve her soft skills, Ms. Janahi participated in many events both in school and at the university. She was selected for the Youth Innovation Center’s girls summer camp in 2010, an experience that developed her communication and leadership skills. She also participated in the Young Leadership Conference organized by
Ms. Alaa Al-Hekma school in 2013. Ms. Alaa was also an active member of the Youth City 2030 program where she was awarded for her active participation.

Ms. Hissa Al-Hamer graduated from AL Iman School with distinction in 2014. She was a member of the student's council and was a class leader for many years. Currently, Ms. Al-Hamer is a fourth-year Architecture student at the University of Bahrain. Last year, she was selected to do her training at one of Bahrain's finest architectural firms; Mohamed Salahuddin Consulting Engineering Bureau. Ms. Hissa has been awarded many times for her active participation in teams and was congratulated continuously for her excellent teamwork skills. Ms. Al-Hamer is also an outstanding public speaker. She was chosen to deliver many speeches during her studies. After her successful graduation from the University of Bahrain, Ms. Hissa plants to pursue a graduate degree abroad.

Dr. Al-Khalifa is a researcher with a Masters degree in Conservation and Regeneration and a Ph.D. in Landscape, which is, focused on the interrelationship between Cultural Change and Urban Sustainability, particularly in the Arabian Gulf Context. Her research aspires to contribute to the understanding of sustainable urbanism within the context of transformed cultures, urban islands, and urban archipelagos. She was part of a team that won the Golden Lion award in the Venice Biennially in 2010, and she was awarded RIBA's president’s award for research in 2012. Dr. Al-Khalifa is also interested in the importance of sustainability in real estate, as an asset class, the dynamics of considering sustainability assessment tools in real estate development and the influence of visualization on the opinions and actions of decision makers. She has published two journal articles and two articles in conference proceedings. She also obtained two professional certificates; the ISM Certificate in Sales and Marketing Management and the NAIOP Advanced Certificate in Commercial Real Estate Development. Dr. Al-Khalifa is currently the lead researcher in a $22,000 research project that looks into visual discomfort and architecture and is also leading several other research projects related to sustainable urbanism and real estate development.