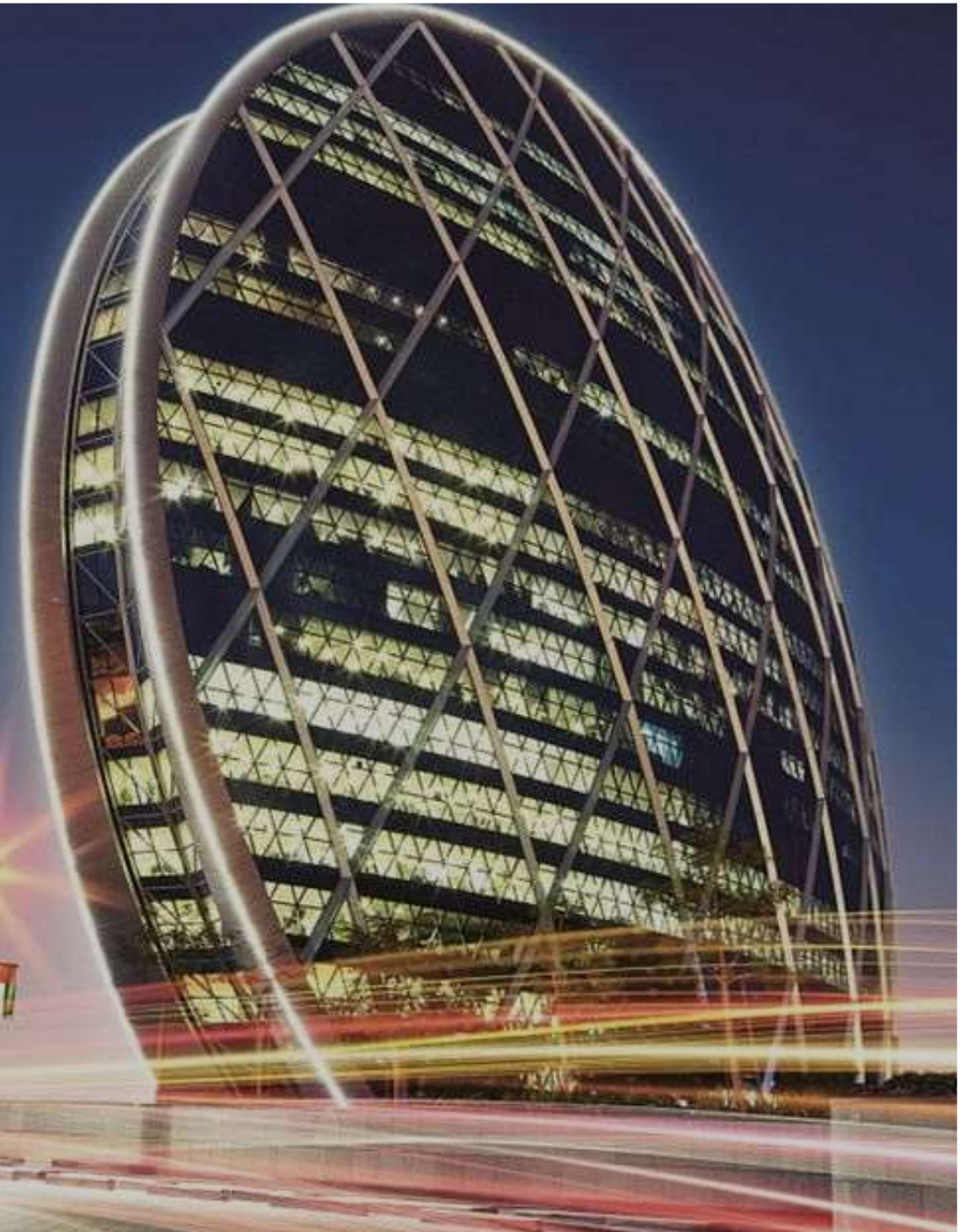




ALDAR INNOVATION REPORT

2021





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We are proud to present Aldar's first Innovation Report, which provides insights into our vision, strategies, and approach to innovation, as well as the 2021 milestones and the partnerships that empower us to deliver well-differentiated customer experiences and accelerate our growth and profitability.



About Aldar's Innovation Report 2021

Welcome to Aldar's first innovation report

Disruption is the new normal, and it is redefining how organisations function and how they plan for the future. Therefore, innovation is key to transforming business models to meet the demands of a changing world, maximise customer service and experience, increase revenue streams, and optimise operations and processes.

As a leading developer, owner and manager of real estate and an investor in a growing PropTech portfolio, Aldar views innovation as a catalyst for efficient and sustainable growth and a positive force for business and economy.

We are embarking on our innovation journey, and we have already laid the foundations for lasting impact, by connecting people, process, technology, and data to drive agility, scalability, and profitability.



CEO's Letter

Innovation is an opportunity to better serve customers and generate shareholder value

For almost two decades and through market shifts and disruptive global events, Aldar has responded in ways that have strengthened our company and consolidated our leadership position in the UAE. To further strengthen our market position, we are leaving behind traditional ways of working, adopting new data-based strategies that offer a future-back perspective, and applying a customer-centric view of what the future may look like.

Our diversified business model, growth mindset and robust governance underpin our success. In addition, our focus on innovation is grounded in a milestone-led and outcomes-focused approach, coupled with utilisation of established indicators to measure our innovation performance and adjustment of our approach to achieve improved year-on-year results.

The investments we have been making in innovation and digital transformation over the past few years, are yielding results. Aldar's score on the Global Innovation Management Institute (GIMI) Innovation Index has almost doubled between 2019 and 2021. We are also developing new capabilities, innovating products, successfully addressing critical priorities, such as sustainability and also attracting top talent. As a result, we are well positioned to capitalise on the next wave of growth.

To succeed in the future, we need to contribute to the development of entire ecosystems of companies with these new capabilities.

In 2021, we made a number of investments in PropTech-focused venture capital funds. This presents opportunities to work with emerging and innovative businesses, gain insights into new technologies and benefit commercially from early deployment.

However, innovation is not only about growth; we are also investing in innovation to drive efficiency. We are leveraging new technologies, integrating teams, and simplifying processes, leading to faster, more efficient decision making and increased ability to design, develop and future-proof our projects more efficiently than ever.

Throughout 2022 and beyond, we see a myriad of opportunities. We are excited about the innovation initiatives underway across Aldar; from start-up partnerships that enable us to deliver better value to our customers and improve our own efficiency and agility during this time of change, to our transition to becoming a venture-building business that empowers its entities and harnesses the entrepreneurial spirit of its employees. Our strategy to invest in innovation for growth and efficiency is both ambitious and achievable. We are committed to delivering our goals and I have confidence that we will. And in doing so, we will drive sustainable, long-term value for our customers and our shareholders.



Talal Al Dhiyebi
Group Chief Executive Officer
Aldar Properties

Foreword



Reinforcing Aldar's innovation capacity



Maan Farid Al-Awlaqi
Executive Director - Strategy
and Transformation

Looking back at the events of the past two years, our conviction that our best way forward is innovation is greater than ever. Aldar has realised, even before the COVID19 pandemic, that prioritising innovation is key to unlocking untapped potential and achieving growth. Of course, realisation is a simple first step, and we had to move quickly to address opportunity areas, even as the pandemic unfolded, committing more than US\$ 10 million to new concepts launched through our internal innovation incubator, Ibtikar.

Innovation deals with critical business issues like growth strategy, transformation, investments in new technologies, project portfolios and the creation of new business lines. It also relates to softer challenges, such as, promoting company-wide creativity and discipline, stimulating entrepreneurship, accepting failure, encouraging collaboration and learning, and facilitating networking and communications. Simply put, innovation is a mindset that should run throughout the whole organisation.

Our priority is to foster a culture of innovation within Aldar and to guide this innovation to unlock the unlimited potential of employees, promote risk taking, enrich customer experiences, and add value to our organisation and shareholders. Instilling an agile culture that embraces new working models helps us mobilise innovation, as does the ability to challenge our teams to think differently, explore new concepts, and persist in the pursuit of unique solutions, despite setbacks or even failures. Innovation, continuous learning, and information sharing processes build, embed, and spread new knowledge and capabilities that mature into upgraded execution and measurably improved results.

However, Aldar's innovation strategy is not only inwardly focused. Through our investment in specialist venture capital funds, we gain exposure to emerging and disruptive technologies; keep our fingers on the pulse of the future by identifying the key trends and themes that will set the scene for our sector in 5- and 10-years' time; and tackle some of our strategic priorities such as, sustainability, smart development, and space utilisation. For example, through our investment in PropTech focused funds, Aldar gains access to ventures that are revolutionising the real estate sector and can be an active player in a market that attracted more than US\$32 billion of venture capital funding that was invested in the global PropTech sector in 2021.*

With well-defined objectives and a clear roadmap for execution, we are intent on pursuing constant innovation, fueled by transparency, collaboration, and an explorer's mindset to leverage emerging technologies, to develop new products, design new services, create new lines of business and open new markets.



*Source: 2021 Real Estate Tech Venture Funding Report



Aldar's Vision

Aldar's vision is to "become a leading real estate developer and manager that creates memorable experiences and value for our customers and shareholders."

Aldar's Mission

To place our customers first, by embedding sustainability, quality, technology and innovation in everything we do.

A Focus on Innovation

In 2018, Aldar established its first innovation department, a dedicated central function with an annual budget allocation, that focuses exclusively on finding and developing new game-changing ideas and concepts, both from within Aldar and from around the world.

Aldar's innovation department focuses on high-impact, strategic opportunities, and provides the business with the expertise needed to build local and incremental innovation and drive a culture of innovation more broadly within Aldar. Working closely with internal stakeholders, the innovation department has created a clear process for concept selection and evaluation to reach a decision to proceed or not quickly and efficiently and within a short period of time.

Aldar is investing in and collaborating with the best start-ups to enable our next phase of growth. To facilitate this, Aldar created a direct innovation procurement process, simplified its legal agreements, to make them more start-up friendly and enhanced its eProcurement portal for start-ups to gain swift access to potential collaborations. Aldar also simplified its NDAs and changed its business terms to ensure that start-ups doing business with Aldar are promptly paid and also that their performance is measured against a realistic standard.

Innovation Milestones



2018



- Aldar's innovation department is established
- Ibtikar, Aldar's internal innovation programme, is launched

For more information on Ibtikar, please see page 15



2019



- Initiation of start-up collaborations
- Fund allocation for piloting and testing concepts
- GIMI certification of 25 employees



2020



- Manassah 1.0 is launched
- Policies are created to integrate innovation KPIs
- Dedicate 10% of staff time to innovation
- Incentive and rewards for Ibtikar approved

For more information on Manassah, please see page 25



2021

- Aldar launches the Scale Up programme for PropTech start-ups
- Manassah 2.0 is launched
- Aldar partners with global venture capital firm, Fifth Wall, to invest in the European PropTech fund
- Applications for Scale Up 2.0 open

For more information on Scale Up, please see page 23



Innovation Strategy

From big data to smart communities, PropTech to AI, there are several enablers of innovation across Aldar. Innovation empowers the optimisation of customer-centric strategies, curation of well-differentiated experiences, increasing operational efficiency and accelerating technology solutions that propel growth and advance sustainability and inclusion - it shapes the way we work today and underpins the future of our business.

We inject innovative thinking and solutions in all aspects of the business and focus on four overarching themes:

1. Propel Expansive Growth

- Boost profits through innovation fueled initiatives
- Improve on gross profit and revenues from innovation projects



2. Drive Impact across Three Fields of Play

Sustainability

Aldar focuses on rolling out, fostering, and scaling solutions that have a direct and immediate impact on the environment, community, and economy in the following areas:

- Energy saving
- Recycling
- Composting
- Climate Impact

Space Utilisation

Aldar pursues optimum utilisation of current and future space across all asset classes to embed great flexibility and curate new customer experiences through:

- Repurposing space
- Creating multi-use spaces
- Attracting new business models

Smart Development

Aldar creates intelligent and connected ecosystems that engage all stakeholders and builds new communities faster, more efficiently and with a focus on quality and future proofing through:

- Leveraging multiple cross asset data streams
- Utilisation of the Digital Twin environment
- Consolidating supply chains

3. Foster Innovation Excellence

- Agile innovation projects execution
- Diversify and optimise innovation portfolio
- Foster & grow the external innovation ecosystem
- Drive better conversion of ideas to projects
- Increase capacity through resources allocated to innovation

4. Embed a Culture of Innovation

- Create operational models that enable key innovation functions & create cross-functional synergies
- Build strong innovation governance & reporting metrics that are suitable for the nature of innovation projects
- Embed the right behaviours and incentives to foster a culture of innovation



Aldar's Innovation Mission

Aldar's innovation mission is to create stakeholder value by being the most innovative real estate company in the region through:

- 1.** Promoting a culture that encourages risk taking and rewards employees for taking on new projects
- 2.** Delivering customer-focused innovative products and unique experiences

Internal Innovation at Aldar

Aldar believes that dialogue is key to innovation. As such, we encourage and cultivate shared thinking, support ideation, and have a dedicated team offering innovation expertise and concept development support to all of Aldar's businesses.

Methodical Approach

Aldar recognizes that innovation is not a single activity, but a set of interrelated company-wide activities that require complementary—but distinct— strategies. Aldar's approach for innovation is two-fold, supporting internal innovation projects and scouting and nurturing external innovations that meet Aldar's selection criteria, and investing in synergetic disruptive start-ups.

The focus on innovation is enabled through four innovation management verticals:

1. Incubation of Aldar's internal innovation projects through design, launch, and scaling of new businesses
2. Providing support through innovation consulting
3. Partnering and investing in the start-up ecosystem
4. Strengthening innovation governance and alignment through a dedicated innovation board



Innovation Governance Structure

Aldar put several frameworks in place to align goals, allocate resources and decentralised decision-making authority for innovation, across the company and with external parties. These innovation management frameworks enable us to capture learnings and consider economies of scale when investing and implementing innovation projects.



Innovation Board

Group-wide steering committee composed of diverse Aldar Group executives from all levels and across businesses and central functions. The Innovation Board is responsible for evaluating priorities across key result areas and project proposals from the various Innovation Committees and submitting recommendations to the Aldar Investment Committee. The Innovation Board works through four sub-committees:

New Projects

Screens, prioritises, and selects all new project and resourcing proposals (with appropriate KPIs) to be submitted for approval by the Aldar Investment Committee.

KPIs & Engagement

Tracks, monitors, and reports innovation KPIs by project, engaging with functional departments to identify and address performance challenges to facilitate achievement of stated objectives.

Partnerships & Government Affairs

Responsible for engagement with external stakeholders with a focus on identification and activation of value creating partnership opportunities.



Policies & Delegation of Authorities

Responsible for ensuring that policies, processes, and authorities are fit for purpose, while continuously working to improve their efficiency and effectiveness in response to feedback from the business.

Departmental Innovation Committees

These committees serve as the main channel through which functional departments across the group engage with the Innovation Board. They include dedicated resources in each key function, focused on developing and recommending innovation projects related to their departments to the Innovation Board, in addition to closely monitoring and reporting on their performance.



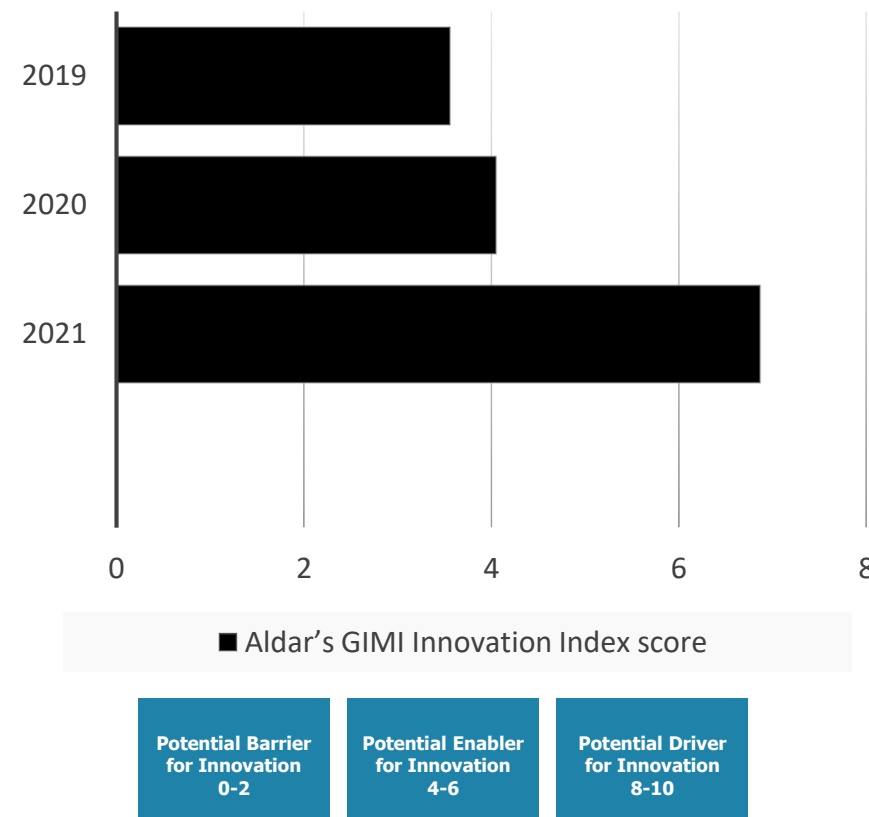
Global Innovation Management Institute (GIMI) Innovation Index

GIMI Application on Aldar Entities

Based on the maturity matrix of the Global Innovation Management Institute Index, Aldar has enablers for innovation. Aldar has also achieved year-on-year improvement across all verticals and overall GIMI Innovation Index score since 2019, and our 2021 score has almost doubled compared to 2019.

Additionally, in a recent employee survey conducted by the Innovation Department; 84.7% of respondents believed Aldar is innovative and a further 80% of them said that they wanted to participate in innovation events and workshops.

Aldar's Innovation Performance 2019-2021



Since the establishment of Aldar's innovation department in 2018, the Global Innovation Management Institute (GIMI) Innovation Index has been utilised as a benchmark for innovation performance across all of Aldar's business units annually. Based on performance against nine performance criteria, the innovation department works with the different business units to identify barriers, design strategies, and implement action plans to improve innovation drivers and KPIs.

Aldar's Scores

2019

3.56

2020

4.05

2021

6.87

25

Aldar employees
are GIMI Certified

Ibtikar

Within Aldar, innovation projects are launched through our in-house idea crowdsourcing and incubator, Ibtikar. Aldar's employees submit ideas and concepts that can solve business challenges and enhance customer experience through this dedicated programme. Approved concepts go through a three-stage selection and evaluation process.

To date, Aldar has invested US\$10+ million in employees' innovation ideas.



2018

Ibtikar is launched

300+

Submissions to date

10+

Concepts launched

US\$10+ Million

Investment in concepts
launched through Ibtikar

Ibtikar Projects Spotlight

Sustainable Solutions

Grey Water

Water scarcity is one of the most serious risks facing the world at every level and in the UAE the issue of water management is a national priority.

With sustainability at the forefront of Aldar's innovation endeavours and most of the Aldar water consumption being attributed to the irrigation requirements in our assets, maximising water resources becomes an immediate area of focus.

In 2021, an Ibtikar project was born with a business case built with an implementation plan for 2022. The project focuses on the installation of Grey Water Treatment facility that utilises a new cost-effective water treatment technology. The facility has the capacity of 50 cubic metres per day and is located at the Bridges Tower on Reem Island, the treated water will be reused for landscape irrigation purposes around the Towers which is a breakthrough in Sustainability aligned with Aldar initiatives of a sustainable future.

Composting Machine

Aldar's composting pilot in Yas Mall transformed food waste from the various F&B outlets into fertiliser, reducing CO2 emissions and landfill waste, while improving recycling rates at our flagship retail destination.

The project will be rolled out across other retail assets to make sustainable use of food waste and reduce environmental impact.



The Cloud Family of Brands

Cloud Spaces

An innovative concept that was generated and developed internally to achieve the most optimum space utilisation at Aldar's flagship retail destination, Yas Mall, is Cloud Spaces, Aldar's pioneering brand of smart and flexible workspace solutions that utilise and add value to Aldar's real estate portfolio.

Cloud Spaces' concept is positioned at the convergence of premium real estate and unrivalled customer service. It leverages the rise of remote working, growth of freelancing and the structure and community of an office space but adds elements of convenience and hospitality to take the popular concept of co-working space to the next level. It provides dynamic and cost-effective business solutions to help entrepreneurs and businesses thrive.

Cloud Spaces opened its first outlet at Yas Mall during November 2020, with a myriad of carefully curated workspace options, private meeting rooms and professional studios that offer both space and cost flexibility. Demand was so great that by Q1 2021, Cloud Spaces was already planning expansion in Abu Dhabi within Aldar's portfolio, other locations in the capital, as well as international locations.



84%

Occupancy rate at Cloud Spaces' Yas Mall location in December 2021

655

Cloud Spaces registrations by December 2021

20%

Single day passes' portion of Cloud Spaces' 2021 revenue



A win-win scenario for all stakeholders is the pinnacle of innovation.

For Aldar

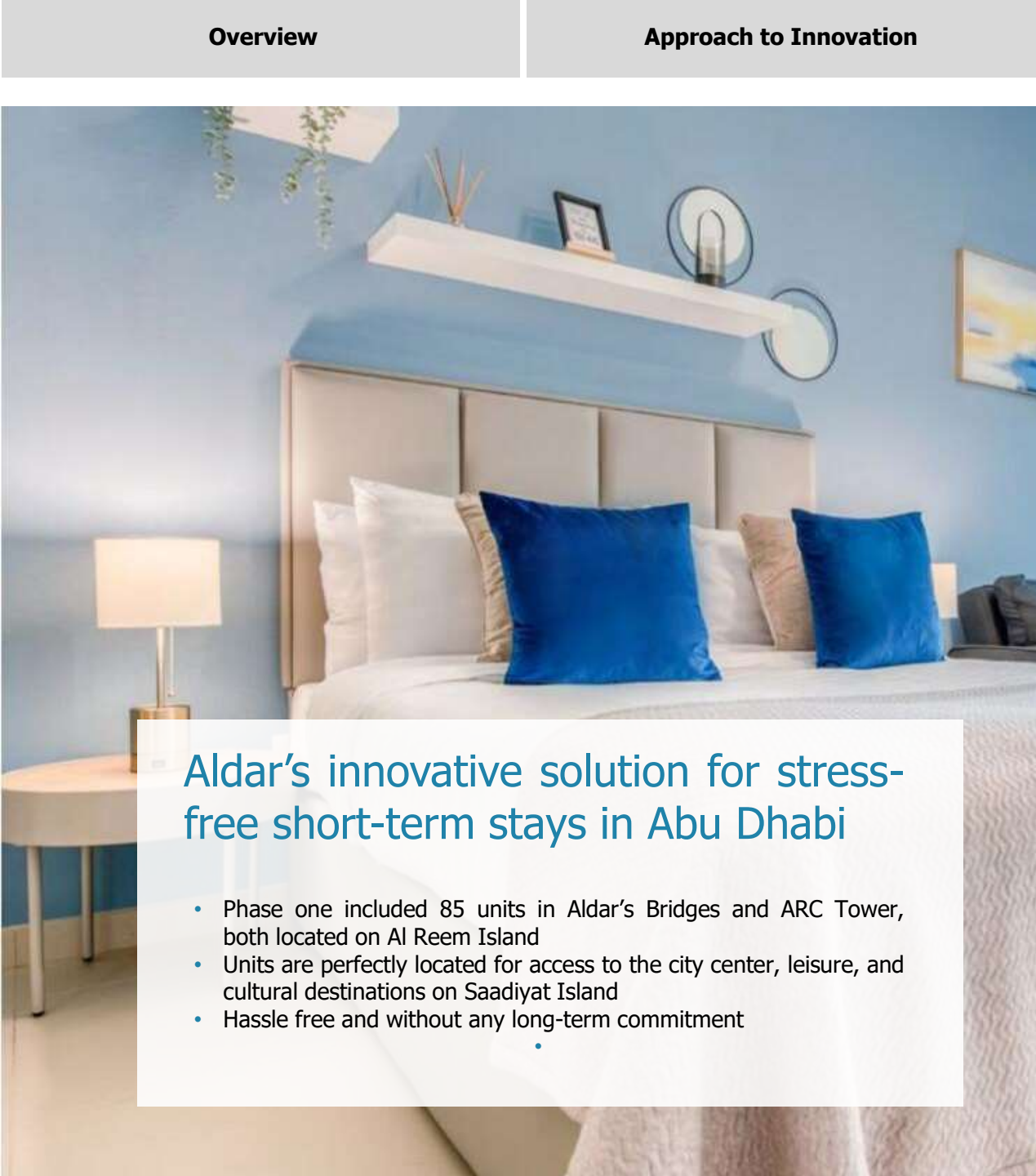
- Innovative asset utilisation that increases value and resilience
- New revenue streams from the existing portfolio
- Additional regular footfall and customers who can shop and dine, as well as do work

For Yas Mall's tenants, and customers

- Valuable service-based addition to the tenant mix
- Value-added service to Yas Mall tenants, who can utilise the space without a membership subscription

For Cloud Spaces' clients

- The convenience of being in a shopping destination - a blend of lifestyle and business.
- The option to expand their businesses through leasing of shop units, pop-up shops or promotional screens



Aldar's innovative solution for stress-free short-term stays in Abu Dhabi

- Phase one included 85 units in Aldar's Bridges and ARC Tower, both located on Al Reem Island
- Units are perfectly located for access to the city center, leisure, and cultural destinations on Saadiyat Island
- Hassle free and without any long-term commitment



Cloud Living

The success of Cloud Spaces triggered further innovation within Aldar Investment, particularly in the area of repurposing real estate assets to respond to shifts in market dynamics, target underserved customer segments, while generating sustainable revenue streams for Aldar. This was the thinking behind Cloud Living, the second brand under the Cloud umbrella.

Throughout 2021, Aldar Investment worked on a concept for short-term stays, where leases for fully furnished and fully serviced residential units range from one day to three months and would include utilities and management fees with no hidden costs. This is a perfect product for business travelers, commuters and families holidaying in the capital, who all want a home away from home for the duration of their stay. It is a product that did not previously exist in Abu Dhabi and would allow Aldar to make optimum use of residential assets and access a global market worth US\$116 billion, as estimated in industry specialist Skift's 2020 Short-Term Rental Market report.



ADRES is a PropTech start-up developing innovative real estate solutions, research and support services to the Abu Dhabi market. The start-up began life as an Aldar employee's idea to consolidate all real estate processes in Abu Dhabi on a single digital platform. The platform would provide a comprehensive and seamless end-to-end services such as, real estate sales and leasing transactions for Emirati and international investors, organisations, and real estate professionals, mortgage options, off plan sales among others.

In May 2019, the ADRES concept and business case were pitched to the executive management of Aldar and got the green light and a budget allocation to set up and commence operations. The project, since then, has been sponsored by Aldar's Executive Director of Strategy and Transformation towards fruition and launch. By the end of 2020, ADRES was registered as a standalone business with 41 employees and technical and product development teams were fully engaged to develop tech-powered solutions, which integrates Abu Dhabi's real estate services into a unified platform to provide integrated, comprehensive and advanced services.

Advanced Real Estate Services Company (ADRES)

Collaborations with Tech-powered Start-ups and Early-stage Companies

Collaboration with emerging start-ups is a cornerstone of Aldar's innovation agenda especially as we achieve more innovation maturity. Corporate start-up partnerships are a growing phenomenon globally. Start-ups tend to have a solid grip on innovation but often need corporate support to build a name in the industry and reach key markets independently. So, our collaborations are anchored by win-win propositions whereby start-ups can benefit from Aldar's resources and access to markets, and we gain early insights into future trends, disruptive technologies, and new verticals.

Aldar works with start-ups to agree clear goals and KPIs to achieve full potential of the partnership, overcome common challenges, and pursue opportunities for growth.

Over the past year, Aldar collaborated with 16 diverse start-ups, from literacy support to AI powered construction, with all securing piloting opportunities with Aldar's various business units.



KamKalima, Lebanon

Founded by Siroun Shamigian, a veteran Arabic language teacher, KamKalima uses artificial intelligence and machine learning — via a web-based platform — to help students from grades 4 to 12 improve their Arabic language skills. Kamkalima's platform features a vast digital library with interactive lesson plans that teach reading, writing, listening, speaking and critical thinking. Lessons are automatically graded and can be self-taught by students or led by teachers.

Kamkalima piloted with Aldar Education in 2021 and Aldar is currently considering expanding the pilot into a scaled solution across its schools.

Cycled, UAE

The UAE-based start-up was conceived in New York University Abu Dhabi. It developed the Cycled SmartBin to increase the quantity and sorting accuracy of recyclables deposited by consumers. AI is used to identify the various materials placed in the bin and proprietary mechanics sort the items into their respective inner bags. Manual bins achieve less than 20 per cent sorting efficiency. By contrast, testing shows that Cycled SmartBin achieves up to 88 per cent sorting efficiency and a 45 per cent increase in usage. To achieve a better recycle rate, the SmartBin comes with a fun incentives scheme. Every time users deposit recyclable waste, they earn reward points that can be redeemed for shopping vouchers.

Cycled has secured a pilot with Aldar's retail assets and the bins were rolled out at Yas Mall and World Trade Centre Mall during Q4 2021 and post pilot the solution was scaled.



Contilio, United Kingdom

UK-based Contilio's ai-powered construction analytics platform is a world-first and turns construction site data into real-time insights on installation quality, progress against KPIs and risks. Launched in 2019, Contilio provides actionable intelligence from 3D construction site data by intelligently classifying all structural, architectural and MEP elements and automatically comparing them with the BIM and the schedule. The easy-to-use software works seamlessly with all commercially available Lidar/Laser scanners and drones.

Contilio secured a pilot with Aldar projects in 2021, through global Proptech Venture Capital firm, Pi Labs, and is currently being rolled out across various project sites. Contilio is used for construction progress tracking and installation quality verification for Phase I of Saadiyat Grove and will provide 360-image visualisation, automated, AI progress tracking and AI installation quality, automatic BIM augmentation and navigation and more.



The Concept, United Arab Emirates

The Abu Dhabi start-up offers design and sustainability consulting services as well as biodegradable, compostable and recyclable consumables made from a range of sustainable materials of high quality. The Concept has broken into the market initially through the aviation industry and then went on to provide solutions in a wide range of industries such as hospitality, medical and other forms of transportation.

Aldar is working with The Concept to refurbish end-of-life construction vehicles as food trucks that will be stationed at Soul Beach. The Concept is also engaged on a project to reuse steel and concrete construction waste into sustainable works of arts that will be placed within Aldar communities.

Start-up Acceleration with Scale Up

In 2021, Aldar launched Scale Up 1.0 which is a market access equity-free accelerator programme that works with global start-ups that are spearheading the latest technology solutions in hospitality, retail, residential and commercial management. Scale up provides a gateway for start-ups to access tangible growth opportunities, build strong networks, and validates global PropTech startups providing the latest cutting-edge real estate technology to enter and grow in the UAE and GCC markets, through pilot projects with Aldar and other leading industry players in the region.

Collaboration with start-ups enables Aldar to remain agile by tapping into emerging trends and investing time and resources in PropTech. The Aldar Scale Up Programme is also a good fit to our innovation lens, as it provides a unique platform which connects promising startups with business units and equips them with the tools to scale their businesses and grow in Abu Dhabi. The Scale Up Programme also upskills Aldar's business units to implement innovative and sustainable real estate technologies through pilot projects. It complements Aldar's existing innovation initiatives including Manassah, Aldar's retail start-up programme.

Scale Up 1.0 was targeted at global start-ups that focus on:



Sustainability



Smart Development



Space Utilisation

Scale Up 2.0 is targeted at global start-ups that focus on:



Blockchain



Data Analytics



Customer Experience

200

Scale Up 1.0
applications

285

Scale Up 2.0
applications

Scale Up 1.0 Start-up Cohort

The Scale Up 1.0 cohort comprised 10 companies and three were named winners of the first cycle.

All three winner start-ups have been shortlisted to secure a paid pilot contract with Aldar and are offered subsidised housing and office spaces in the UAE. They also can join Hub71, Abu Dhabi's global tech ecosystem and enjoy generous incentives, a series of value creation services and access to leading corporate and government partners that facilitate opportunities to scale products, capitalise on market opportunities, develop talent, and raise funding, as part of a vibrant fast-growing community.



Envio

A German start-up that offers innovative IoT products that allow buildings to operate a fully integrated ecosystem that connects, collects, analyses, and optimises data, autonomously or manually from web-enabled devices.



GBuilder

A Finnish start-up that developed a platform that enables digital communication between the customer, project team, and construction site.



Metrikus

A UK-based start-up that offers property software solutions, through an innovative digital platform, with focus on operational efficiencies, estate optimisation and indoor air quality. Metrikus secured a pilot with Provis during November 2021. The scope of the pilot includes sourcing, delivery of hardware, relevant software deployments and training and project management. The sites covered by the pilot include Yas Mall, Aldar Head Office and Provis Head Office.



Manassah

Pioneered by Aldar, Manassah is a six-month accelerator programme that nurtures entrepreneurial talent, advances and supports homegrown retail and tech concepts and bolsters innovation within UAE and GCC as part of Aldar's effort and dedication to support the local ecosystem. Manassah 1.0 was targeted at UAE-based SMEs operating within the retail, café, and restaurant space. Manassah 2.0 was launched in 2021 and was open to a broader range of retail businesses, including technology-enabled start-ups and projects driving sustainability across the GCC.



2020

Manassah is established

500+

Project submissions over
2 cycles

70%

Of Manassah 2.0 finalist
concepts are founded
by women
entrepreneurs

35%

Of Manassah 2.0 finalist
concepts are founded by
Emiratis

AED 1M

Financial incentives including
space at an Aldar retail destination
for winning Manassah concepts

Partnerships for Innovation

UAE Ecosystem Partners

To build effective ecosystems for innovation, Aldar collaborates with an established network of local and international stakeholders, who all contribute to venture building in a multitude of ways, from increasing local innovation capacity, to acceleration and commercialisation.

Abu Dhabi
Innovation Hub

HUB71

Incubator

STARTAD

powered by TAMKEEN

Ecosystem Partner

إنجازات
injazat

Governmental
Digital Partner


هيئة أبوظبي للرقمية
ABU DHABI DIGITAL AUTHORITY

Accelerator and
Network Access

techstars

Education Arm

UAEU

Private Sector Partner


ماجد الفطيم
MAJID AL FUTTAIM

Global Innovation Investments

Leading real estate development companies are increasingly investing in Prop-tech focused venture capital funds to gain access to emerging technologies and to identify future trends. Investment in PropTech is now widely viewed as the new R&D for the sector. Aldar leverages external partnerships to extend its reach and access to the latest disruptive technologies and solutions and in so doing, realise a higher return on its innovation investment.

Aldar started its PropTech venture capital investment with European PropTech fund Fifth Wall. However, our strategy includes diversification into North America and APAC regions with other funds including, Camber Creek, Pi labs, and Moderne Ventures. The diversification of our portfolio allows us to develop a broader perspective and invest in funds and companies disrupting the PropTech sector on a global scale.

Aldar PropTech Venture Capital Investment Objectives:

1. Connectivity to best-in-class global PropTech companies
2. Identification of future trends and anticipation of potential disruption
3. Presentation of actionable technologies to the business
4. Efficiency in internal resources utilisation

Aldar Partners with Global Venture Capital Firm Fifth Wall to Invest in European PropTech Fund

In May 2021, Aldar entered a strategic partnership with Fifth Wall, the world's largest venture capital firm focused on real estate technology. The investment into Fifth Wall's European Real Estate Technology Fund makes Aldar the first limited partner from the MENA region to invest in the fund. Through this investment, Aldar aims to tap into Fifth Wall's large network of PropTech start-ups in Europe to gain access to the latest technologies and trends that are driving the evolution of the real estate sector. This access will provide Aldar with vital insights to inform its business decisions and identify solutions and potential enhancements to the various businesses that are part of Aldar. With the European PropTech Association expecting USD 185 billion to be invested in PropTech globally before 2025, Aldar joins a group of established Fifth Wall strategic LPs from around the world who seek to identify and potentially invest in category leading PropTech start-ups in the European real estate technology ecosystem.

Existing venture capital partnerships and investments





Darna Innovating Aldar's Loyalty Programme

Loyalty programmes are one of the most effective ways to inspire customer retention and increase revenue. According to Bain & Company research, as many as 84% of consumers say they will stick with a brand that has a loyalty programme. And 66% of customers say the ability to earn rewards impacts their spending behaviour.

When Aldar developed its loyalty programme 'Darna', it designed the UAE's most diverse and flexible loyalty programme, rewarding customers on shopping, education, leisure, entertainment, real estate investments, leasing and even property maintenance spend.

The success of Darna is underpinned by its utilisation to add value to Aldar's stakeholders, both retail and lifestyle tenants, by incentivising customers to spend with them and individuals and families residing in Aldar's communities, by giving them most value for every dirham spent within Aldar's assets.

700+

Aldar tenants are active
on Darna

60,000+

Darna members by end
of 2021

20%

Increase in Darna members'
average spend at Aldar malls
in 2021

25%

Of Darna members utilise the
App across more than one
Aldar asset

Championing Start-ups in Hospitality

Customers' engagement with hospitality assets and experiences broadens the scope of innovation to elevate the quality of services offered and deliver a more customised experience. Moreover, the pandemic changed the way hospitality innovates to accommodate the rules of the new normal, while creating opportunities for strategic innovation, as a new foundation for the industry's evolution.

In 2021, Aldar hospitality piloted six start-ups to drive immediate impact on specific aspects of asset management, sustainability as well as customer experience.



Winnow

Aldar collaborated with Winnow, a UK-based start-up that helps hospitality operators run a more sustainable, profitable business through cutting food waste, to identify key waste reduction opportunities across various assets on Yas Island and the Eastern Mangroves.

Winnow's scalable solutions help track and reduce waste through the use of AI powered cameras in kitchens that identify the specific types of foods that are wasted. The specialist software puts a cost on these food items and generates insights to chefs to help them achieve significant reductions in food waste over time.

Opaala

Aldar's collaboration with home-grown start-ups includes ones that are transforming the hospitality space. One of these start-ups is Opaala; a smart, contactless, cloud-based platform that allows guests at restaurants, cafes, cinemas or other venues to order and pay directly from their mobile. Opaala will be initially trialled at Soul Beach, restaurants and cafés located at Mamsha Al Saadiyat during 2022, with a view that it can be rolled out across Aldar's hospitality portfolio in subsequent roll out phases.

Real-time Hotel Occupancy Ticker

In June 2021, Aldar implemented a digital tool called Real-time Hotel Occupancy Ticker for senior management of Aldar to monitor and receive live updates of the booking pace across all its portfolio of owned and managed hospitality assets. This roll out is in line with Aldar's use of digital tools to strengthen insight generation, grow sales by generating timely offers and enhance the overall customer experience.

A close-up photograph of a man's hands, one of which is wearing a black watch, as he interacts with a detailed architectural model of a modern house. The model is constructed from cardboard and features various colors like brown, white, and grey, with cutouts for windows and doors. The man is wearing a light-colored, textured button-down shirt. The background is softly blurred, showing what appears to be a window with a grid pattern.

Designing and Developing Smart Communities

The COVID-19 pandemic has deeply impacted how we use space and our expectations of it. As customers look to the future, there is a growing demand for developments to be more efficient, sustainable, and resilient. To deliver on customers' vision, digital tools are essential.

As part of a department-wide drive to transform Aldar Development into a leading digital-first business in the region and a pioneer in embedding digital innovation into operations and products, Aldar has deployed several innovative digital solutions in 2021. These solutions were focused on designing flexible homes and developing smart communities.

Build As You Grow (BAUG)

BAUG is a unique solution that was initiated within Aldar's in-house crowdsourcing and incubator, Ibtikar. It responds to Aldar's vision of creating flexible spaces, future-proofing homes and adding value to our customers' investments by increasing home adaptability and affordability.

BAUG comprises a set of affordable digital design options for a customizable, future proofed upgradable villa from 1B/D to 5 B/D villa that are all pre-approved by authorities. BAUG allows customers to expand their homes over time without the need to move out as their families grow. It offers different size, category finishes and option offerings to suit customers' design preferences and budget.



Collaboration with Archistar on Water's Edge

Aldar Development is collaborating with Australian start-up Archistar on phase two of Water's Edge, Aldar's popular development of Yas Island. Archistar's technology centralises the entire planning and development process on a single digital generative design platform, to empower developers to assess and design profitable sites.

Archistar has been working closely with Aldar on specific solutions that factor Aldar's sites. The technology allows Aldar to complete comprehensive site assessments rapidly, providing master planning and building design options that are compatible with site parameters and restrictions. This allows for visualising of all potential concepts early in the process, providing feasibility, design, and profitability analysis, therefore minimising risk from the onset.

Developing a Smart Community at Saadiyat Grove

Saadiyat Grove is an AED8 billion community located in the heart of the Cultural District on Saadiyat Island. The mixed-use community features 60,000 square metres of experiential retail, entertainment, and leisure space designed to create an inclusive community. The development is planned as a smart district with greater connectivity, automation and technologies that are attuned to customers' needs and aspirations.

As part of the design concept of Saadiyat Grove and with the deployment of state-of-the-art technologies, smart buildings have the potential to reduce energy use, trigger preventative maintenance, and decrease operating costs.

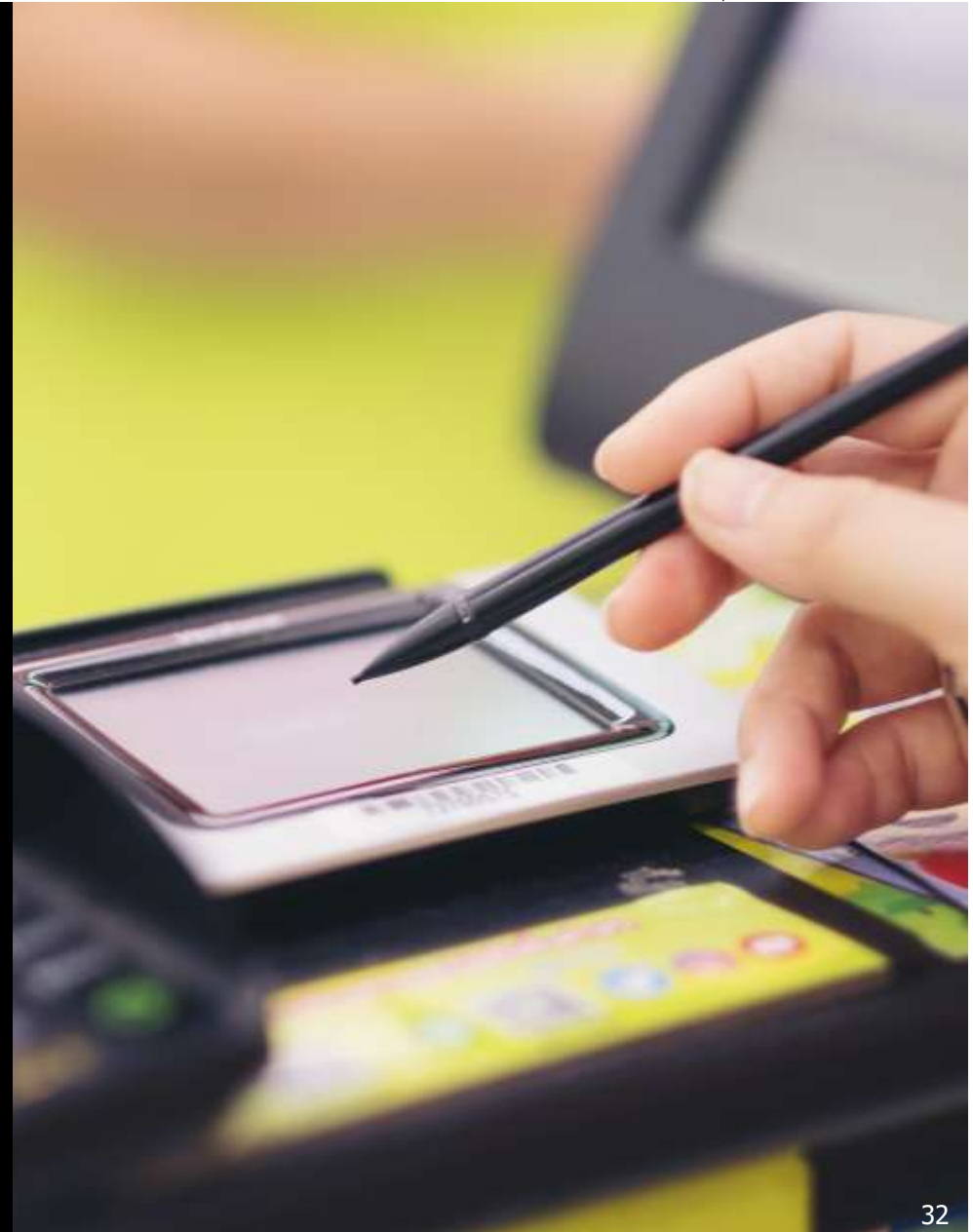
In 2021, Aldar collaborated with German gaming enthusiasts to build a Saadiyat Grove world on Minecraft. The innovative project was showcased at several marketing events for Aldar and attracted significant buyer interest.

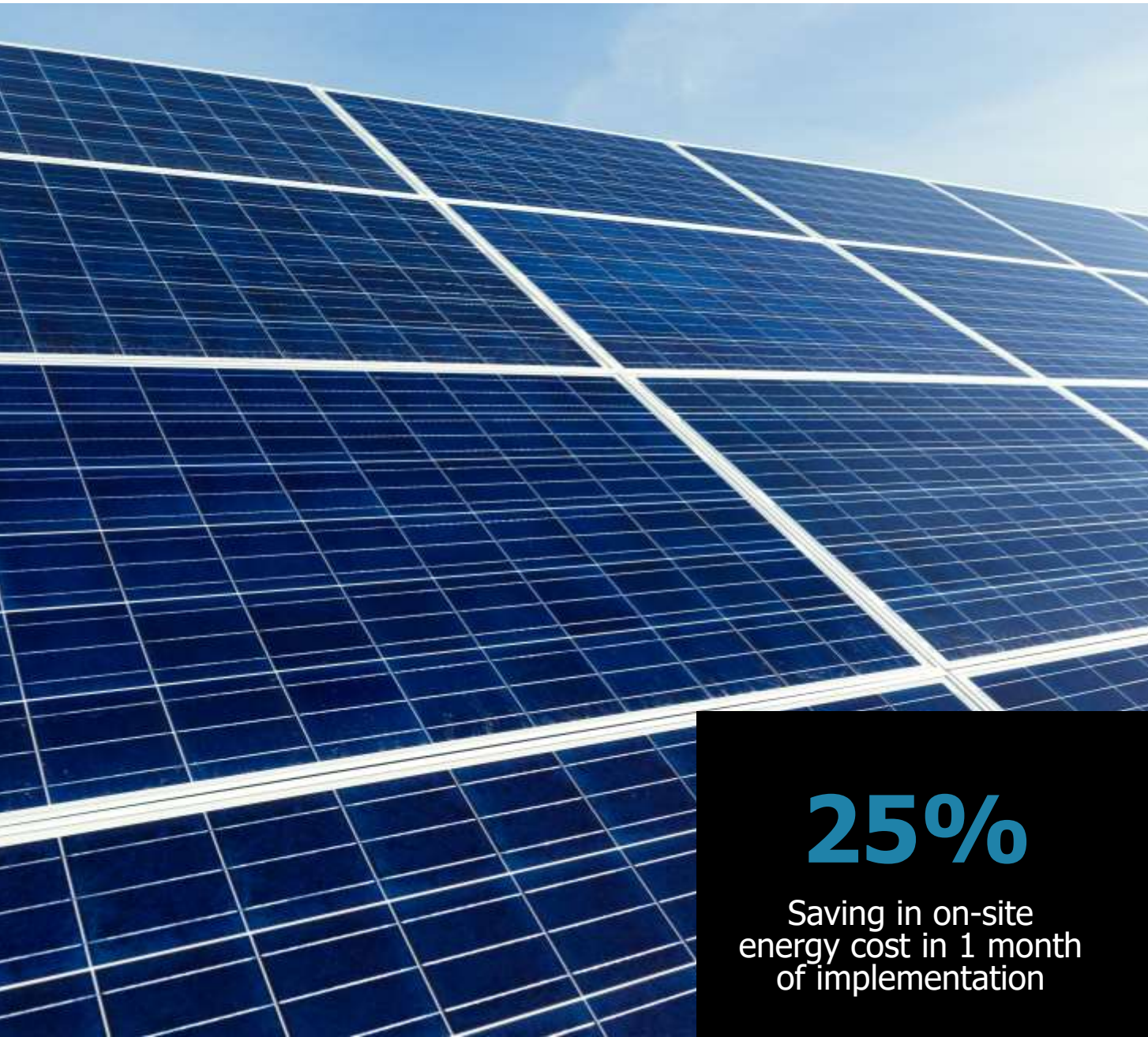


Majid Al Futtaim and Aldar Aim to Become First Developers in UAE to Digitalise Real Estate Sales Transactions

Majid Al Futtaim Communities, part of Majid Al Futtaim Properties, and Aldar are working together to create and implement digital real estate sales platforms for their businesses. The move follows the announcement of a new E-Law introduced by the UAE government in 2021, that regulates and allows electronic transactions to be conducted by recognising that a verified electronic signature has the same legal validity as a physical signature. The developers are aiming to be the first to implement such online sales systems in the UAE.

The digitalisation of the real estate transactions will make property purchases, sales, and management a simple, quick, and convenient process for both UAE and overseas customers. The move to electronic real estate transactions not only significantly reduces the time required to complete transactions, but it also enhances the customer experience and is more environmentally friendly due to the reduction in paper usage. Buyers can complete the transactions digitally from the comfort of their own home or office, regardless of where they are in the world.





Aldar Projects Innovates to Meet On-site Energy Demand

To meet growing energy demands on one of its largest construction sites, Aldar Projects introduced and built the first Solar Hybrid Power Plant of 50 kWp capacity, for the first time within Aldar. The solar plant allows Aldar Projects to mitigate the challenges of using diesel fuel in areas with no grid connection.

The technology has been commissioned in Baniyas North Project in October 2021. In the first month of implementation, the estimated 17% cost saving was exceeded to 25% and 13 tons of carbon emissions were saved.

In November 2021, a cost saving of 30% was achieved. The project was a great learning opportunity for the project teams and will be rolled out on construction sites with no grid connections as well as future sites.

25%

Saving in on-site energy cost in 1 month of implementation

30%

Saving in on-site energy cost in second month of implementation

13

Tons of CO₂ emissions saved

Education Reimagined

Innovation is one of the watchwords of the twenty-first century. Education needs to be at the heart of this innovation-led transformation to align learning with the demands of an increasingly digital and connected world. In order to achieve this, Aldar Education realises that technology is an indispensable ally to establish a disruptive form of education that puts learning in a new light.



COVID-19 Response and Technology-led Learning Ecosystems

Aldar Education rolled out in 2021 several initiatives that leveraged its significant earlier investments in technology:

COVID-19 Response

With the shift to 100% online learning throughout most of 2020 and 2021, Aldar Education was able to draw upon existing expertise to ensure a seamless transition to its Anytime Anywhere Learning strategy to offer both synchronous and asynchronous experiences for entire school communities. Bilingual support packs were also distributed for all staff, students, and parents, and dedicated support hotlines were also set up to provide additional support to all groups.

Learning Management System (LMS) Deployment

After a thorough evaluation exercise, the Blackboard Learn LMS was selected as the solution that would be rolled out across Aldar Educations' cluster of schools to support the transition to online learning throughout the pandemic. The implementation strategy was launched in January 2021 and has been praised by the Blackboard team as one of the most well-organised deployments of the solution in both primary and secondary schools.

Within the Charter Schools, Department of Education and Knowledge (ADEK) selected Canvas by Instructure as the LMS to be deployed across cycle two and cycle three schools. The implementation began in September 2021 and has been praised by both the ADEK and Instructure project teams.

Technology Coach Network

Across Aldar Educations' family of schools, we have built a robust network of technology coaches who have helped shape and lead our technology and innovation strategy. This is a unique and innovative network within the region, and we have developed cutting edge digital teaching and learning ecosystems for all our schools leveraging leading hardware and software solutions.

Members of this group of experienced educators also create termly technology and innovation impact reports for their schools' leadership. Each project covered within the reports is mapped to the specific inspection frameworks and is used to create school development plans and school evaluation forms.

Innovation for Inclusion

Aldar Education schools are inclusive learning environments, where students with special education needs thrive alongside their peers. In the context of inclusion in education, innovation means making allowances in Aldar Education's established learning frameworks, introducing new methods, ideas, and tools to ensure optimum learning experiences for students of all abilities and to ensure that no one is left behind.

Rollout of Key2Enable Assistive Learning Keyboards

Key2enable is a start-up that creates innovative multifunctional tools for digital accessibility which enables communication, learning and school inclusion for people with physical, intellectual, and learning disabilities.

During the 2020-2021 academic year, Aldar and Aldar Education partnered with Key2Enable to provide students with complex physical disabilities access to assistive technology in the form of the Key2Enable keyboard and the Expressia learning platform.

Five families were identified for the initial trial. Children with Cerebral Palsy, Muscular Dystrophy and motor coordination disabilities engaged in a comprehensive assessment of their needs and were subsequently provided training on how to utilise the keyboard. One student, Mariam, thrived during the project as the keyboard helped her develop independence and ability to communicate in written form. Early findings indicate benefits for students in accessing their learning and families as they engage with technology and each other in new and novel ways.



Check out the story of Mariam Al Zaabi, a student at Al Mamoura Academy and her experience with Key2Enable [here](#)

Special Olympics UAE Unified Robotics Competition 2020-2021

Special Olympics UAE Unified Robotics Competition is a STEM-based enrichment experience bringing together neurodiverse students with their neurotypical peers to work together as one team. It focuses attention on students' capabilities and minimises differences, breaking down barriers and creating friendships.

Aldar Education was the official education partner for the Special Olympics UAE Unified Robotics Competition 2020-2021 for Abu Dhabi and Al Ain. 30 teams from eight Aldar Education schools participated in the competition and they accounted for 24% of all the teams that took part in the competition.



Future Proofing and Learning Innovation

Games for Change

Games for Change's (G4C) is a virtual exchange program for teens in the United States, Bahrain, Israel, and the United Arab Emirates in which youth from the four countries join in creative dialogue and collaboration based on a shared interest in video games and game design. Students join peers from other countries to form "game studios" and collaborate virtually to create games facilitated by classroom teachers trained in G4C's game design curriculum. Each year, participants submit game projects to the Game Exchange competition, with finalists and winners acknowledged at a culminating awards event.



The UAE partners for this initiative are Aldar Education and twoFour54. Round one of this initiative kicked off in September 2021 with the participation of 67 students from the following Aldar Education Schools:

- Al Ain Academy
- ADNOC School Sas Al Nakhl
- Al Ghad Charter School
- Mubarak Bin Mohammad Charter School



Minecraft: Education Edition

Aldar Education is a regional leader in the use of Minecraft Education Edition. Our use of this platform has gone from strength to strength, and many exciting projects were completed in 2021. For example, the team at Mubarak Bin Mohammad Charter School worked to recreate their school using Minecraft. Using the school's blueprint, the students practised their understanding of different math concepts, project management skills and teamwork to begin the build. The project is ongoing, and students are undertaking the development of different spaces within the school and non-player characters based on their teachers.

Innovating For Sustainability: Solutions for Social and Environmental Challenges



This is an exciting time for innovation in the social and environmental sector at Aldar. As well as a growing number of initiatives, hubs, and incubators, there is also a growing body of research and knowledge.

Innovation and sustainability form an important link in the pursuit of environmental, economic, and social development. As Aldar strives to embed sustainability in all aspects of its work, innovation becomes a strategic priority.

In 2021, Aldar invested and implemented a Sustainability Data Management System (SDMS). The SDMS comprises more than 1000 data entry points and allows us to periodically track economic, environmental, and social performances. The platform made data collection more efficient, reliable, and timelier compared to previous years' processes and allows Aldar to constantly track its carbon footprint.

Another synergy between Innovation and Sustainability is being investigated to explore the opportunity of launching a program that focuses on climate PropTech solutions. This is aligned with Aldar's commitment to decarbonization and will open several opportunities for SMEs working in the climate PropTech sector to showcase their innovative products and eventually pilot them with Aldar.

SDMS HIGHLIGHT

In 2021,

300+

Users reported on more than

1000

Environmental, Social and Governance (ESG) metrics.

Innovation to Achieve Shared Value

Compared to their competitors. Companies with a sustainability agenda are also more likely to survive through crises, experience less share price volatility, and generate more revenues over the long run. Additionally, companies that engage in sustainable innovation go beyond seeking immediate profits, they are more focused on making long-term investments in technologies and people for the future.



An Outlook to the Future: In Conversation with Salma Kayali, Vice President, Innovation, Aldar

How would you go about instilling a culture of innovation within the diverse business units within Aldar; each with a different mandate and areas of focus?

Salma: When we set up the innovation department in 2018, the focus was instilling a culture of innovation, which required having a strategy in place that supports the entire business as we advanced on our maturity journey, because every company will need different tools and plans to get their staff on board at every stage of the innovation journey. This strategy covers employees, who will be champions of innovation; operationalizing Innovation, building products, or ventures, or improving processes. Earlier on our innovation journey, we had frequent innovation awareness sessions and we also have incentive programs in place to get employees onboard.

Essentially, it's a holistic exercise and our approach is quite methodological; raise awareness, set up programmes, including learning programmes, bring in trainers and experts in innovation and innovation training. We certified 25 staff in Global Innovation Management under the Global Innovation Management Institute (GIMI) which is the same index that we measure ourselves against. And this was done to upskill our staff and enhance their understanding of the requirements needed to innovate products and build new business models and obviously also learn about change management principles.

This approach helped us navigate the challenges that any large corporation with a red management style would have. We embedded innovation in our own frameworks and set out to execute these learning initiatives with a very high satisfaction rate among employees who participated. We knew then that we were on the right track.

“We embedded innovation in our own frameworks and set out to execute these learning initiatives with a very high satisfaction rate among employees who participated. We knew then that we were on the right track.”

What do you consider to be breakthroughs for innovation at Aldar over the last year?

Salma: Doubling our budgets between 2019 and 2021, this meant that we had greater flexibility in pursuing some key opportunities. Also, the formalisation and tying KPIs to innovation was a significant milestone, as was working with UAE-based and international start-ups through the Scale Up programme and other partnerships that we have in place. Also, between 2020 and 2021, piloting with start-ups increased from four to 16 in just one year.

And this intense focus on innovation is paying off in major ways; Aldar is being approached by potential external partners to invest in our innovation programmes and play a more strategic role in shaping and directing them with Aldar, such as Majid Al Futtaim and Mastercard. This demonstrates how well our innovation projects are perceived by the industry, and we view this as somewhat unexpected, in this early stage of our innovation journey, but it is also highly indicative of our performance and a highlight for the year.

How do you keep abreast of opportunities for innovation within the UAE market and globally?

Salma: We use our partnerships with four venture capital funds that Aldar has invested in. They are our eyes and ears into the market. They help Aldar with scouting for start-ups and identifying companies that are poised to be potential unicorns and the trends that are likely going to disrupt the real estate sector.

Also, the partnerships that we have with international companies, global innovation hubs, incubators and accelerators enable us to have access to the global marketplace. Through these funds and partnerships, we have access to the LPs and other players in the sector, and importantly we develop a thorough understanding of what they are doing and why they are doing it. Additionally, we have our own in-house teams that run research around the market and have access to publications and analyst reports.



Whenever one talks about innovation, the association with change is always there. Delivering concrete results requires leadership buy-in, stakeholder alignment and openness to the start-up world.

How do you navigate these prerequisites and overcome any resistance to change?

Salma: This is a great question! Innovation is not only about building a culture but also frameworks that enable innovation to navigate the corporate environment, with the least conflict possible, avoiding bottlenecks and resistance which always exist within any organisation, especially large and diversified corporations.

Within any organisation, if you are to set up an innovation hub, you must give involved departments and teams some autonomy around decision making and disposition of funds. They cannot follow the typical red management style because that will halt innovation immediately. And we understand this very well. And that's why we introduced a new set of procedures that support bringing start-ups onboard such as, a direct procurement process for start-ups that we want to pilot with Aldar, so they don't have to go through a competitive tendering process and be disadvantaged against bigger companies. We have also ensured that we have favourable payment terms; we waived guarantees and ensured that payments happen within days for startups. Also, Aldar's NDA agreements with start-ups are simplified for this specific reason. These processes are owned by the respective internal stakeholders and departments, and they have autonomy over them, this in turn helps innovation thrive. For the innovation department, giving us the same space and autonomy and with no immediate expectation of an ROI, are some of the reasons that allowed us to thrive as a division.

For Aldar's start-up collaborations, what do you usually look for?

Salma: We have push and pull approaches and they both align with what the business requires, what issues need to be addressed or simply how we can do things better and more efficiently. Once an interesting start-up is identified through one of the channels I previously mentioned, we take it and funnel it through our existing criteria and assessment tools. If our assessments are favourable, we introduce the start-up to the business unit and things progress as per the set process.

One of our key benchmarks is the three fields of play, but we don't exclusively look at how a start-up adds value within one or more of the three priority areas of sustainability, space utilisation and smart development. We also look at emerging technologies such as blockchain and the Metaverse. These are completely new, disruptive ways of looking at the real estate sector that do not necessarily fall under the three fields of play that I previously mentioned but are important to explore and leverage to stay ahead and maintain a competitive advantage.



Explore **Innovation at Aldar**

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