



ERD

OUR CONNECTED WORLD

aquamarine



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Nicholas Traviss

↳ Aquamarine, Owner/Director

Welcome from the Director

This decade marks an exciting time for Aquamarine. With several groundbreaking projects completed in recent years, and a number more in progress, we're expanding comfortably into what we do best – building deeply collaborative partnerships and projects that push boundaries.

Globally, we are in a time of great change, and new opportunities and challenges ripe for innovation are emerging for those with the appetite and the vision to seize them. Populations are growing, the environment is changing, and how people and cultures across the world live and interact is always evolving – never more so than this past year.

As designers and implementers of entertainment destinations, we are called to respond to this changing world, to ensure the experiences we create meet contemporary needs, capitalise on opportunities, and better serve people, communities and the planet.

To achieve this, receptiveness to change is crucial for both people and for businesses. Just as nature continues to evolve, only when we too are willing to accept change as a constant can we readily adapt to it. If we can adapt ourselves and our practices, the more adept we can be to overcome challenges, and recognise opportunity when new information comes to hand.

Just as the natural world never stands still, neither can we.

Our connected world

Celebrating Aquamarine's teams, projects, clients and partnerships, Insight is our platform to tell you their stories, alongside new concepts and topics that inspire us.

Woven through these stories, you'll discover several themes that lie at the heart of our current work, past projects and our vision for our future:

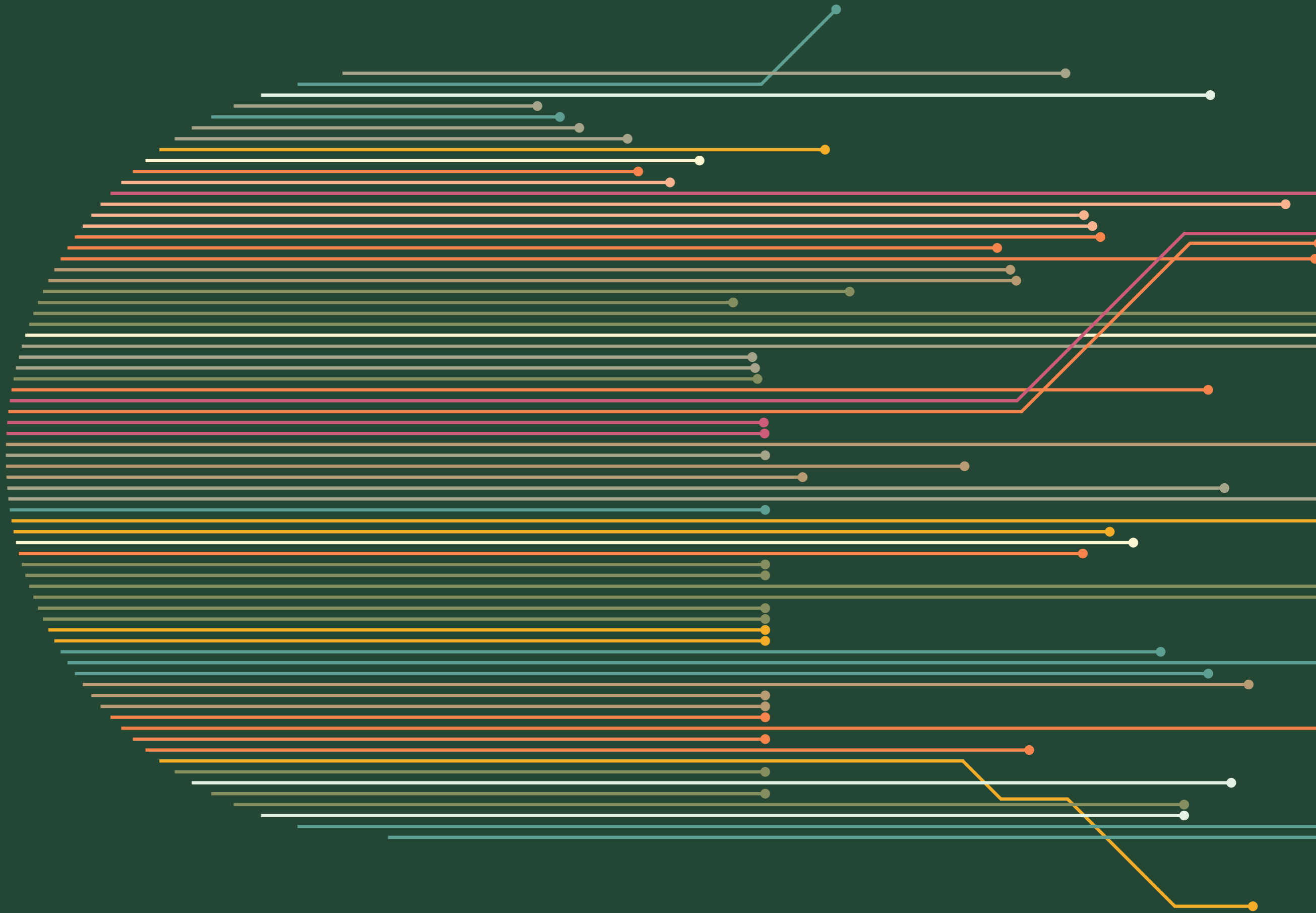
↳ Shared humanity: Clients who inspired us with generous thinking that is larger than themselves, and who trusted us to open up true collaborative partnerships.

↳ Diversity: Places and communities that let us glimpse deeper into the complexities of the world, and see unique perspectives.

↳ Progress: Briefs that challenged the norm and called upon us to raise the benchmarks.

↳ Conscience: And last but not least, an underlying desire to do the right thing and create better, more sustainable outcomes – for business, people and for the environment too.

Our work inspires us constantly to think a little differently about the future, and about what makes good development and good entertainment. We hope these stories do the same for you.



Galactika and a partnership for the people.

Collaborating to build a stronger hub for
the Kogalym community, with LUKoil.





In the sub-arctic Russian territory of Khanty-Mansi Autonomous Okrug-Yugra, lies the young township of Kogalym. Founded in 1975 to service the vast oil fields within the region, a large portion of the town's 60,000 strong population continues to supply a workforce for the industry today.

Kogalym's most significant employer is LUKoil – one of Russia's largest companies and a global player in the oil industry. Deriving its name from the initials of Kogalym and two other towns in the region (Langeepas and Uray), the close bond between LUKoil and the Kogalym people runs deep.

Despite the job security and development opportunities that LUKoil affords, the remote location of Kogalym has until recently starved its inhabitants of entertainment and other core facilities that typically foster community. With Kogalym families and others within the region resorting to travelling over 2 hours away to the nearest city Surgut or as far as Moscow for recreation, something needed to be done.

LUKoil's founder and CEO, Vagit Alekperov, devised a solution – Galactika. Approaching us with an idea to help Kogalym's people and families live better, through the development of a cultural and sports centre, the brief posed a promising opportunity to make a positive impact on the lives of many – a challenge we jumped at.

↑ The sculpture and gardens at Galactika's front entrance, on opening day before the tape was cut.

“Today Galactika is the largest entertainment facility in Kogalym and the only facility in the area offering such a range of unique attractions.

Galactika provides the most comfortable conditions for satisfying essential social needs: including, leisure, physical and cultural, thus significantly raising the standard of living and social attractiveness of the whole region. Each area of our Complex covers a particular aspect of culture and sport so that every visitor can find something of interest.

We recognize the responsibility that Galactika has to the society as a whole and customers at a personal level; the Complex has become an effective platform for social events and projects, on a city, district and federal level.”

Pavel Lyubenin

↳ SKK “Galactika” Director



“Opportunities for connection, recreation and learning are vital to every person’s wellbeing, and we’re proud to have helped provide more of these opportunities for the people of Kogalym. In the process, we expanded our own horizons, learning about the way of life and history of such a unique place in the world. The project continues to be a true learning experience, and we are grateful to be part of it all.”

Nicholas Traviss

↳ Aquamarine, Owner/Director

As we researched the project to better understand the needs of the community, the Galactika concept quickly evolved into something much more ambitious, resulting in a turnkey integrated family entertainment destination serving all the community’s needs for connection. Incorporating an oceanarium, aqua park, winter garden, coffee shops, natural green spaces, retail spaces and areas designed to facilitate social gatherings both large and small, the precinct design provided a canvas to bring locals together. The vision: a facility that supported a broad, changing spectrum of activities from the most casual and personal moments, to group events and celebrations.

Beyond just entertainment, other aspects of wellbeing were pivotal to the concept of Galactika. Educational and learning opportunities are central to the design, ensuring the complex is community-oriented while providing locals with opportunities to experience habitats and natural wildlife not available to them in the local region. The need for longevity and durability in harsh environments and principles of sustainability also underpinned the development as we focused on utilising eco-conscious building systems, and advanced long-term performing materials appropriate for the sub-arctic conditions of the area.

↖ Galactika’s botanical gardens are separated into 6 distinct areas with different forest types, including a Japanese garden and tropical rainforests. This was our test case for a large-scale approach like we have undertaken at Yaranga Gardens, our next project.

→ The Galactika water park is fully functional even in deep winter, when this picture was taken. Bathing and the enjoyment of *Banya* has a long tradition in Russia and swimming is a popular form of exercise, making this a popular feature of the centre.





↑ Galactika's underwater aquarium tunnel is the longest in Russia.

Very early on we knew that the success of the project would be measured through the new experiences and recurring rituals that people would create there.

With this benchmark always in mind, Galactika as we know it was born. A true team effort, the project has proven to be a feat of collaboration, and a testament to how obstacles can be overcome through partnership. With the invaluable trust and support of our client representatives at LUKoil Head Office, LUKoil Western Siberia, and the "Our Future" Foundation, we were able to build a truly international high-performing partnership network to deliver the project.

With Aquamarine managing all project concepting, operations and management, we contracted several specialists and experts, both locally here in New Zealand and internationally, to complete the large-scale works to a high standard.

Our exhibit and spatial design team based in New Zealand and South Africa delivered the design and planning of the precinct's 14 key attractions. A Turkish Project Management and Engineering team of the main Contractor from Kazan, Erel Gazstroy, provided 1,000 workers on the project. And a Turkish technical design team (SFMM) was contracted as Technical Designer of the works. Other partners included legal support from Charles Russell in London to ensure the project's structure could succeed and JLL and Crocus in Moscow consulting on tenants and retail brands.

Working within the context of international dynamics, politics and sanctions, the project was a learning curve requiring significant agility and adaptability in finding solutions and creating new ways of working.

Galactika was completed in 2016, with new projects continuing to arise as our long and fruitful partnership with LUKoil grows. Together so far we have progressed over USD\$350M worth of works, across community educational and entertainment precincts, residential, and landscaped parklands.

Galactika itself continues to evolve; we have, since completion, undertaken an extension to the development that will increase its size and retail space by an additional 80% due to demand and success of the original development. The enormity of Galactika's impact on the Kogalym community certainly is clear.

As Mr. Alekperov shared with President Putin in conversation, "My private fund, Our Future, invested in Kogalym. A centre built together with LUKoil includes everything: an aquarium, a water park, four cinemas, restaurants, shopping galleries, bowling alleys, climbing gyms, a skating rink for children and so on. This practically resolves social development in this region."¹

As part of our commitment to long-term success Aquamarine continually undertakes a learning process, observing visitor trends and data in order to adapt, modify and improve for the future. Included in this commitment is a complimentary review three years after completion to assist in optimising future recommendations for improvements to building systems, business and marketing operations.

Ongoing Partnerships

Our work to nurture Kogalym's community hasn't stopped at Galactika. Read about our innovative upcoming project to further enrich the Kogalym community – a self-sustaining precinct that is pioneering our future approach to environmentally minded entertainment development: the Yaranga Biome. See page 18.

Philanthropic Leadership

Vagit Alekperov is a key figure in not just leadership and commercial enterprise but also for social good in Russia. He is active in many initiatives to support and build wellbeing in communities, including Kogalym. Learn more about him and his key charitable initiative the Our Future Foundation on page 96.

Meet Our Team

Read more about Aquamarine's South Africa-based international design team who helped to bring the concept to life, from spatial design to habitat research and execution. See page 92.



Enrich
lives

&
places



A new take on ancient inspiration.

Yaranga Gardens
& Cultural Centre

Just as Aquamarine completed work on the first stage of the Galactika mall and entertainment centre, Mr Vagit Alekperov from LUKoil approached us with an exciting new request. Little did we know that this unique brief would plant the seedling of an idea that came to fundamentally change how we approach entertainment design.

Offering significant benefits for the Kogalym community while acting as the spearhead for Aquamarine's pioneering new concept methodology, Yaranga will be the very first Aquamarine Biome[®] to come to life in 2023.

Our brief was to create a botanical garden and cultural centre near Galactika, that would bring a tropical rainforest experience to Western Siberia while paying homage to the indigenous people of the surrounding region. It was suggested that this building take the form of a 'chum' – also called a 'yaranga' – the traditional dome-shaped housing of Russia's Northern nomadic indigenous people.

→ See P.39 to learn about Biomes



- ↑ Our design for Yaranga includes not just the centre, but the surrounding gardens as well, making a seamless transition from surrounding land.
- ↗ The new performance stage presents a bold modern design and features a glazed roof, surrounded by seasonal flower gardens.





As we expanded on the brief, we dove deep into the cultural history of the region, interweaving tales of the past with a heightened understanding of the region's contemporary communities. The threads of indigenous culture now run much deeper through the project than simply in the building's form itself. Reconnecting with how the past informs the present, Yaranga renewed our appreciation for the powerful potential role indigenous people and their wisdom can have in our developments and wider society as a whole.

Although only comprising less than 5% of the world's population, today's indigenous people protect 80% of global biodiversity.² The deep connection that we all have with nature and our environment is reflected in many cultures and traditions. Stewards for a more sustainable and holistic way of co-existing with nature, indigenous people offer an incredibly valuable source of knowledge and important resource in education that is of great benefit within modern day businesses and educational entertainment design and to society as a whole.

From this, a fresh new perspective on entertainment precinct design emerged; a concept that would help us chart a new path towards sustainable development – and which now informs our vision for Aquamarine's future.

Where did it all start? Through the process of exploring how to bring a botanical garden to life in this remote sub-arctic landscape, and the challenges of building in this environment, we knew it needed something special and truly unique. Especially if it were to effectively drive tourism into this remote area, and, critically, captivate the local population too. The vision? A precinct containing not just tropical and sub-tropical botanical rainforest habitats, but also an aquarium, vivarium, terrariums, aviaries, and leisure activities. To allow these habitats to thrive in the harsh environment in a sustainable way, cutting edge engineering and construction practices would need to be employed.

As we explored these multi-faceted elements of the development, and how we could bring these together in a more thoughtful and cohesive way, the idea of a Biome was born. Within a Biome, various elements are brought together within a self-sustaining, cohesive whole, rather than a collection of isolated 'features'. ↗

The Yaranga Biome will simulate mountain and rainforest habitats and feature underwater exhibits, allowing visitors to take a journey from mountain treetops to rivers and lakes, via the babbling brooks, streams and pools of a tropical rainforest, observing the lives of fauna and flora in each environment along the way.

↖ The lower walkway extends over an Amazonian tropical flooded forest, complete with flooded forest species, forming as accurate an environment as possible in this location.

↗ See P.39 to read more about our Biome concept methodology

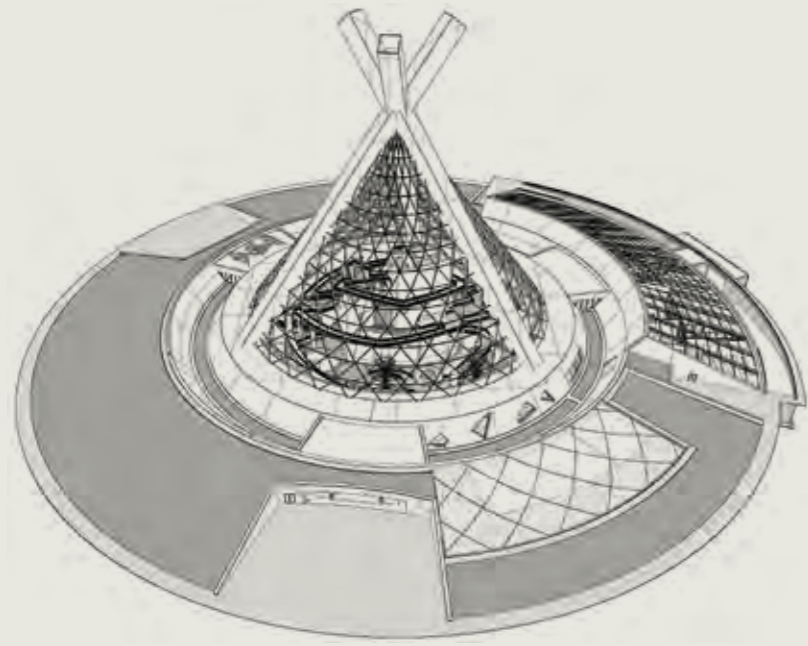
The Biome is designed to showcase the natural world, and how diverse animals and plants live and interact with each other within distinct habitats. But, more than that, it is designed to engage and inform through recreation and fun. Our goal is that it will be a centre for conservation and education, even containing breeding programmes for endangered and rare species. A first-hand experience highlighting the need to protect the world's forests, it will be a stalwart for the environment.

Given the advanced knowledge required to operate the rainforest gardens, an educational centre will be developed to facilitate this need. Offering advanced training in botany and related fields, recruitment will be simplified with Yaranga employees receiving the necessary qualifications through classes and a training laboratory.

This educational centre will also provide a base of operations for children and adults alike who share an interest in natural sciences. With the ability for numerous courses and subjects to be catered to, lectures can be held for the benefit of the Kogalym people and for groups and schools from other cities within the region.

Cultural learning too will have a home at Yaranga, a place for visitors to better understand and experience the indigenous cultures of the region. Developing the cultural centre's educational exhibits, we explored the geography and history of indigenous peoples throughout the region, coming to understand how cultural identity and geographical place converge and how we could better translate this for visitors. Among our learnings from research we discovered that tribal groups of the region were often named for the rivers they lived on – highlighting the local peoples' deep connection to nature and place. The cultural centre will focus mainly on the Eastern Khanty people, in whose original territory the city of Kogalym stands, but will also recognise wider learnings from across the territory's complex and diverse cultural tapestry.

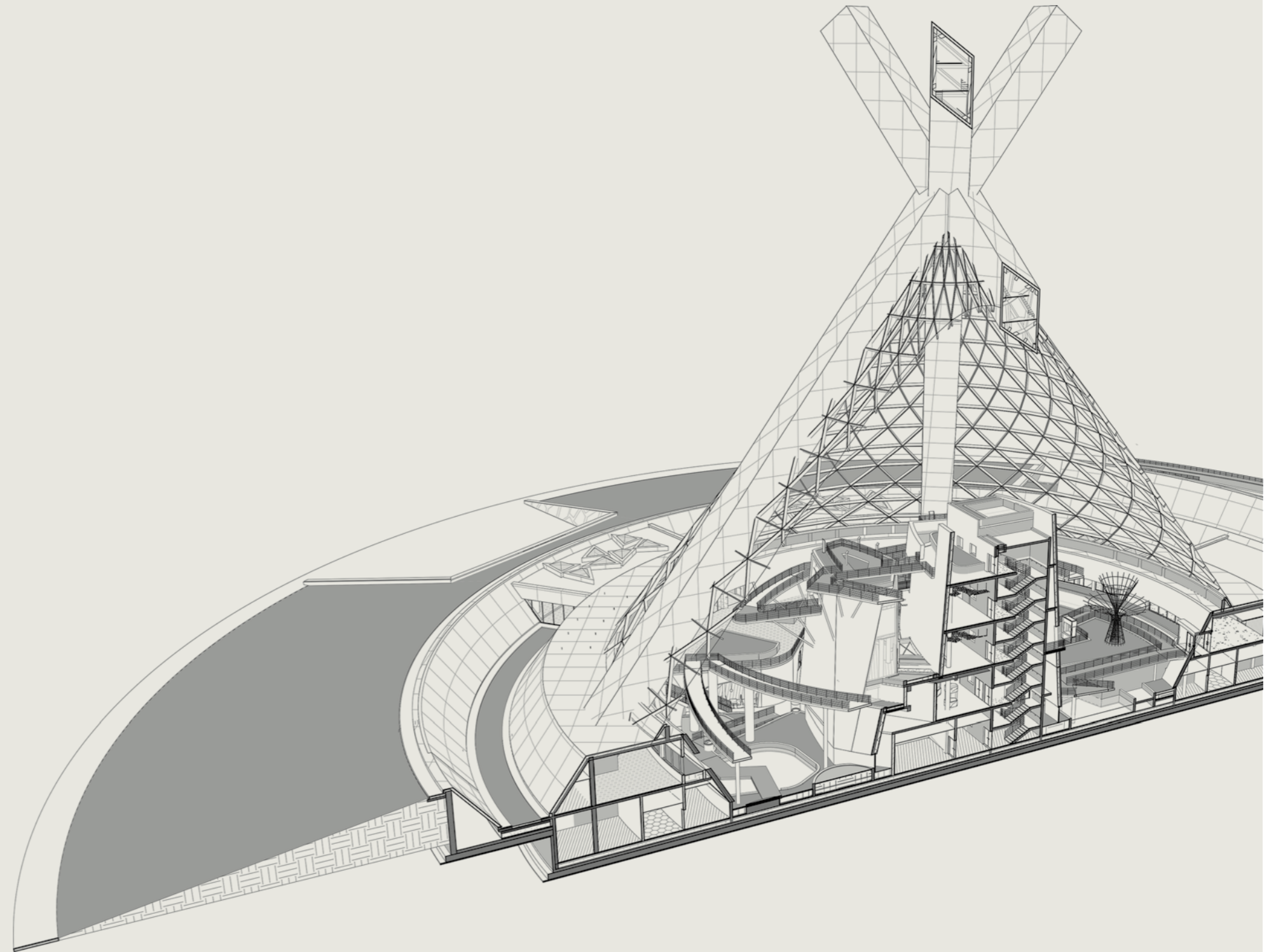




The Yaranga complex takes its shape from the traditional dome-shaped housing of Russia's Northern nomadic indigenous people.



The cross section showcases the complexity of the extraordinary concept – requiring input from specialists in aquarium construction, education, ventilation, air conditioning and glazing techniques to make the project come together.





Celebrating culture

The Khanty-Mansi Autonomous Okrug-Yugra is an area of cultural complexity and diversity. Accurately and respectfully representing local cultures is crucial to the project. In designing informational exhibits as well as the overall concept of the project, our team of experts are instrumental in ensuring the project is sensitive to the cultural history of the region.



Understanding nature

Every species down to the last snail is carefully considered within Yaranga's curated ecosystem. Employing the knowledge of a number of biologists and species experts, our intention is to build habitats, not simply put creatures and plants up for display – creating a harmonious ecosystem that accurately represents true natural environments.



Serving the community

The project will contribute significantly to individual and wider community wellbeing. Offering social and educational opportunities, as well as the chance for locals to explore exotic habitats alongside local cultures of the region. The development will also contribute to the local economy through job creation and tourism.



Intelligent building

With a team of experts contributing, Yaranga will be built to exacting standards of engineering and sustainable thinking. Replicating a hot and humid rainforest environment isn't easy when external temperatures reach between -30 and -40 C in the unforgiving Siberian winter, but advanced materials and building technologies allow us to achieve the seemingly impossible. With the likes of aquarium tanks recycling water to nourish rainforest canopies, we innovate and develop what is needed to ensure success.

Delivering Yaranga Gardens

A 360° Team

Bringing together the technical and creative elements of a project this complex is no small feat. Developing Yaranga Gardens Cultural Centre has taken enormous collaboration and strong partnerships. Like every Aquamarine project, we built a bespoke, highly specialised team that transcends national borders, to find the right set of skills for the task.

As Yaranga unfolds, we are drawing on experts in fields ranging from anthropology and historical cultures, through to artists, designers, engineers and biologists who each bring an indispensable perspective to the project.

Led from New Zealand, we have partnered with local teams in Moscow (technical, project and engineering) and St Petersburg (natural systems and biology), with several specialists engaged remotely from as far as Albuquerque, New Mexico. With a highly specialised team of subject-matter experts, we can ensure no detail of Yaranga is left unconsidered, from the local cultures represented, down to the last species of snail.

Bringing together a team who were technically skilled but also aligned on the vision for the project was paramount. Working with Key Partner LP Group was a meeting of minds. As Vladimir Glizer (General Manager of LP Group) puts it so well:

“In modern society many people lose touch with nature, lose understanding of its fragility, and the inter-relationship between all living things. The entertainment industry is focused on capturing the attention of visitors for a short time, and keeping it for the sole purpose of increasing the profit. It is very rare to see any higher motives. It was interesting for us to create something that would bring visitors closer to nature, allow them to understand and feel its importance — and even more, to change the state of a person’s mind, helping to find a certain internal balance.”

Working with a group of partners who are driven by a challenge as much as Aquamarine’s own team made this project a breath of fresh air. The result: a project that has many details that will amaze the general public, and many others that most will never notice. “Some aspects of the project are visible to everybody, such as the architecture and the unique concept of a tropical greenhouse in a sub-45-degree Siberian climate. Others are hidden and understood only by technical professionals. Behind what is visible there are complex and unique structural and engineering solutions of which we are all incredibly proud.”



↑ Glazing was a key challenge and success story of the project – allowing visitors to make the most of the dramatic contrast of snow plains outside and tropical gardens within as we brought to life the visionary idea from our client Mr Alekperov.

Evgeny Kushchenko, General Director of LP Group highlights the complex vertical landscaping in the building’s central core, the control of different climatic requirements for tropics and subtropics within the same building, balancing the wellbeing needs of different animal species, and addressing energy use and efficiency within the project, as just a few of the broad challenges undertaken during the process of the project.

LP Group’s Chief Agronomist Sergey Grishchenko led a team through the challenge of curating the gardens – with the aim of making them aesthetically interesting through the plants selected, while also interesting from an educational point of view. The unique nature of the project was perfectly suited to LP Group’s expert team, offering a significant challenge with many ‘non standard’ requirements to be solved. “A team way of working, when specialists share knowledge with each other, is a pleasure,” says Grishchenko.



↑ Thoughtful consideration was given to every space within, and the contrast and play of light and shadow throughout – incorporating concepts such as chiaroscuro.

Delivering Yaranga Gardens — a 360° team

Project Concept, Design & Execution

Nicholas Traviss	Project Director, Creative Director, Architectural Design and Project Coordination
Anna Tarasova	Interior Designer
Suzanne Burger	Project Leader and Interior Designer
Nicolas Burger	Graphic Designer and Marketing
Olga Petrova	Senior Russian Regulatory Architectural Designer
Draughting Team:	
Cecilia van der Merwe	Project BIM Lead
Amoré Strauss	Senior Team Member
Hendrik Saaiman, Kristi van Heerden and Julie-Anne Porter	Team Members

Business & Operations

Maxim Belyanin	General Manager and Administration
Vladimir Glizer	Project Manager
Jon Sim	Chief Financial and Operations Manager

Culture & Heritage

Alevtina Borodulina	Researcher in Social Anthropology, Applied Anthropology
Olga Starodubova	Surgut Ethnographic Museum
Olga Balalaeva	Ph.D., Independent Researcher
Andrew Wiget	Professor, Ph.D. Mexico State University

Environment, Habitats & Species

Andrey Oppolitov	Large Fish Farming & Aquarium Exhibit Specialist
Yuri Menshikov	Desert Species, Turtles, Lizards and Crocodile Specialist
Vladimir Charlin	Reptiles, Snakes and Lizards Specialist
Ekaterina Alekseeva	Veterinarian, Ornithologist
Dmitry Ralov	Preparation of Specialist Documentation, Drawings
Dmitry Gorbatovsky	Decorator-Artist Artificial Landscapes
Igor Grutsky	Oceanarium Aquarist
Evgeny Korotkevich	Butterfly Specialist
Nikolay Kotov	Butterfly and Insect Specialist
Irina Brooy	Insect and Snail Specialist
Sergey Grishchenko	Multifield Specialist in Plants of Different Climatic Areas
Irina Kozlova	Specialist in Tropical and Subtropical Plants, Open Ground Plants

Construction & Engineering

Turkish Technical Engineers and Project Management:

Zeynel Burak Ayhan	Construction Engineer and Project Manager
Hakan Dilan	Mechanical Engineer
Maksim Serov	Head Engineer of Project
Yana Grigoryeva	HVAC Project Engineer
Alexander Arsentyev	Plumbing Project Engineer
Alena Sishenek	Electrical Project Engineer
Aleksei Shukalovich	Low Current Systems Project Engineer
Evgeniy Salakhov	Fire Systems Engineer
Evgeny Kushchenko	Construction and Special Systems
Sergey Ivanov	LSS Engineering Systems and Building Engineering Systems

↳ The Yaranga Gardens biome will house a myriad of fascinating species, alongside a 1966 sqm green house, and a 90 sqm purpose-built space for education, with two dedicated classrooms, numerous large-scale infographics and interactive displays. In conjunction with the 260 sqm Cultural Centre, education and learning about Earth's forests and their importance will be central to the visitor experience.



More than 400+ plant species ranging from unique desert succulents to beautiful tropical orchids



Over 40 different fish species ranging from tiny colourful Neon Tetras to the river giant Arapaima and various types of Stingrays



15 species of insects and molluscs including the larger-than-life Goliath beetle as well as a colony of industrious leaf cutter ants



38 different types of arachnids featuring the impressive Pink Bird Eating Tarantula as well as the lesser known Tailless Whip Scorpion



7 different types of birds including colourful Mandarin Ducks and Flamingos



38 species of crustacean



16 reptile species featuring the uniquely interesting Frilled Neck Lizard and various snakes including the Yellow Anaconda

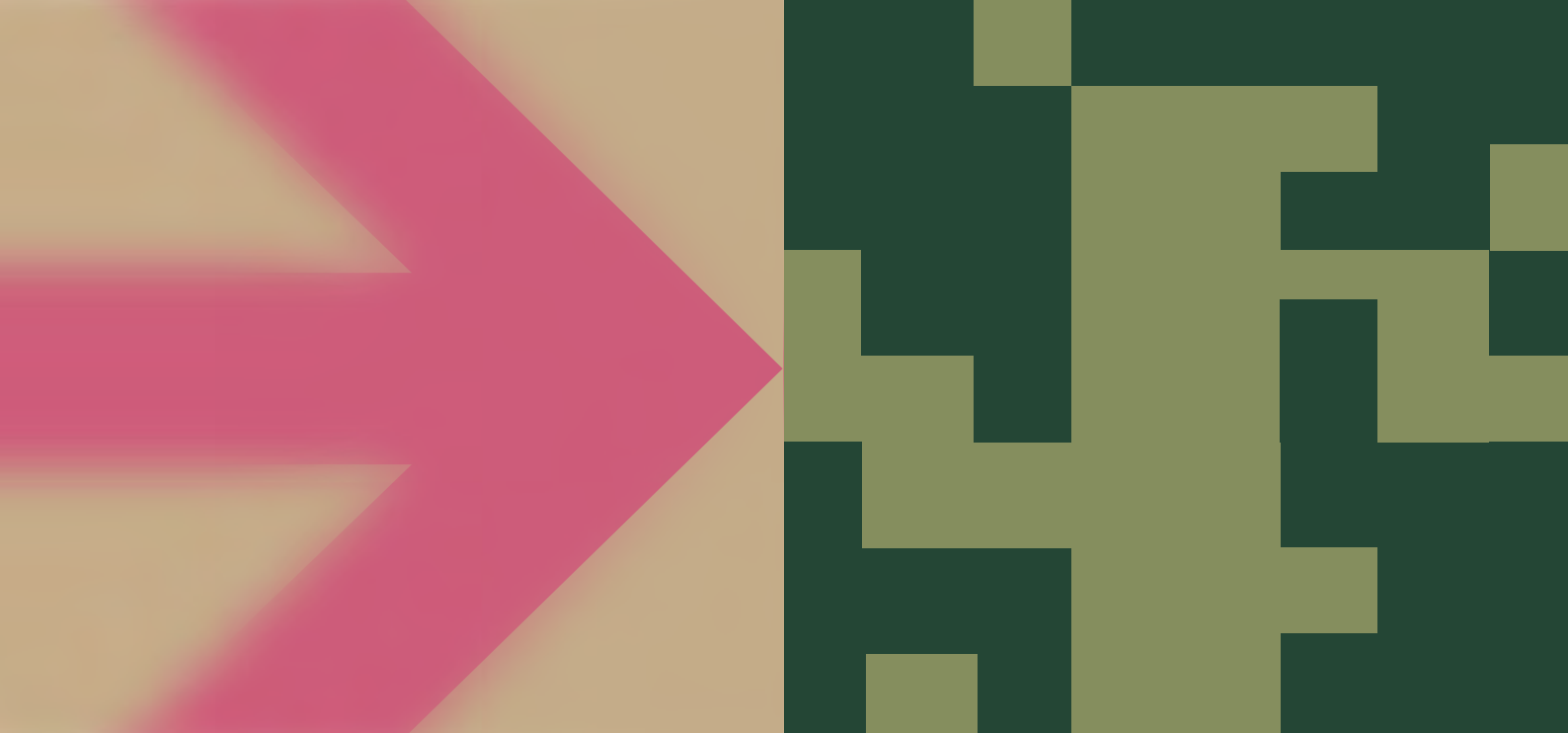


Penguin enclosure featuring gentoo penguins. Incredibly sensitive to their environment, stringent execution and planning allows us to foster their active and curious minds and exuberant personalities




8 species of amphibians including the notorious Poison Dart Frog





**Tell me and I'll forget;
show me and I may
remember; involve me
and I'll understand.**

↳ Proverb



**When we create connection
and engagement, we build
understanding; we leave a
lasting impression; we help
to inspire change.**

Immersive, deeply interactive experiences are at the heart of Aquamarine's approach. Our proprietary entertainment precinct concept, the Biome, creates environments that allow people to interact with habitats on many levels, fostering learning as well as a more positive and engaging entertainment experience.



Come inside a Biome

The sustainable future
of entertainment
precincts

↳ Singapore Gardens by the Bay Cloud Forest. This project by the Government of Singapore, is a major source of inspiration for us, and one by which we set the bar to exceed in our own projects.

Why Biomes ... a call for change

Now more than ever, it is becoming clear that nature, and our impact on it, should be considered in all aspects of our lives. Since the beginning of time, nature has been in a constant state of flux, but recent human impacts on the world's natural rhythm have begun to push things out of balance; a balance we start to see resolve when we remove ourselves from the equation. It doesn't have to be this way. Together, both can equally flourish. But we need to change.

In the face of adversity, humanity has always created opportunity – in fact one could argue our success as a species to date is attributable to our collective ability to respond – to innovate, grow, and to find progress. And as our impact on the Earth continues, now is not the time to rest on our laurels. By no means are we at the peak of human endeavour, there is so much more to achieve.

In the same way that nature adapts, so too can we, and not just as individuals. Businesses, communities, governments and ideas can, and should, change too.



But how does this all relate to Aquamarine, what we do, and our vision?

In a world as big and complex as our own, we each must pick our battles and push for progress in the areas where we are most passionate and able. For Aquamarine, that is in developing entertainment destinations. We have always been conscious of thoughtful curation and care for the natural environments we design, but as we've built our capability, we see now that we can do so much more. That is why we are inviting a new paradigm for experience design.

Up until now, entertainment venues have relied heavily on superficial draw cards, that once experienced, offer diminishing returns in terms of perceived value and enjoyment – hence the perpetual race to release the next 'action-packed' flagship exhibit. Not only is this unsustainable, commercially and environmentally, but it also doesn't push boundaries. It doesn't inspire or call for change. It doesn't fully realise what an entertainment venue could be.

The contemporary needs of our communities and our environment demand we do better in our approach to experience and entertainment design. We now have the knowledge, science and technology available to make this a reality.

We have developed an approach, and of course, we took our concept inspiration from nature.



↑ The iconic Changi Airport Waterfall designed by Safdie Architects

Biome - a dictionary definition:

↳ In biological terms, a biome is defined as a “major community of plants and animals with similar life forms and environmental conditions”.³ A “distinct biological community” that forms in response to a shared physical climate,⁴ Biomes may contain any number of habitats or ecosystems within their bounds⁵

Biomes represent a bounded area with complementary living species sharing an environment for life.

Tropical rainforests are biomes, as are tundra, grasslands, deserts and many other types of distinct environments that have different climates, species and biological profiles on Earth.

↗ See P.56 to read about some of nature's naturally occurring biomes, from which we draw our inspiration.

The Aquamarine Biome: redefining entertainment precincts

↳ Designing for a world where people thrive, and our environment does too, our Biomes are a living breathing space for active entertainment. An Aquamarine Biome is a master-planned entertainment destination with a difference. Featuring an interdependent collection of natural exhibitions, active experiences, lifestyle, wellbeing and educational facilities at its core, a Biome delivers a progressive business proposition that works harder for the environment, its stakeholders and community.

Entertainment precincts re-imagined, the Biome represents everything we have learnt in one comprehensive design approach and answers the shortfalls of the aquarium and entertainment industry 'status quo'. Biomes are ever-evolving social environments that deliver sustainable business by design, greatly enriching the communities in which they are placed, and benefiting those willing to invest in change.

At Aquamarine, we undertake detailed feasibility studies and contextual assessments before every project to ensure a Biome's design is optimised to enhance the local community, be sensitive to the environment, and deliver for its investors.

The time for change is now. For Aquamarine, this is where it starts.

Design inspired by nature

Just as nature's biomes are balanced environments that exist as a self-sustaining community where life can flourish, it is our vision to create destinations that offer this too.

We consider each Aquamarine Biome as a cohesive whole, while ensuring each individual habitat within its bounds is as representative as possible of what one would see in the wild.

Each Biome is designed bespoke to suit brief and context, but all draw from common principles to curate an environment that connects nature, people, entertainment and education.

The 4 pillars of an Aquamarine Biome



Natural
Habitats

Active
Experiences

Lifestyle &
Wellbeing

Education
& Culture

↳ 1. NATURAL HABITATS

the Biome's cornerstone



It is often easy to take for granted the lifestyle and experiences our natural environments afford us. In New Zealand, we are very much privileged by the native fauna and flora that surrounds us, and an innate appreciation for our environment is ingrained in us as a people. From the local lore and history of the indigenous Māori people and their concept of Kaitiakitanga⁷ to the Government-run Department of Conservation we know all too well the benefits that come from protecting, and experiencing, the delicate environment that surrounds us.

Not all people and communities are as lucky, but the ability to 'consume' nature and benefit from its presence should be an accessible experience for all peoples. The Biome achieves precisely that with its natural habitats.

Rather than just 'displays', our natural habitats are carefully curated biological communities designed to thrive in harmony just as they would in the wild. Greatly benefiting from leading technology and engineering, we can replicate natural conditions and support the biodiversity of many natural ecosystems that may be foreign to the Biome's location.

From botanical garden features, that can serve to provide a hub for community building and connection, to aquariums, which present beautiful ecosystems that marry art and science, we can bring the wider world to any community, through Biomes.

Research shows that with natural surroundings, people are more likely to dwell longer.⁶ Along with more profound experiences to enjoy, people linger, engage and invest more deeply, and leave with a more beneficial and positive impression.

Science is now proving what we've always known; the enormous benefits of immersion in nature for depression, blood pressure, stress and general physical and mental wellbeing.⁷ When we integrate nature into our lifestyles, we all benefit – hence why natural habitats are so integral to our Biome design.

➔ **See P.60 to read more about the Māori concept of Kaitiakitanga.**

↳ 2. ACTIVE EXPERIENCES

made to move us



The thrills and spills found within traditional entertainment destinations have not been at all forgotten within our Biome design. Adventure parks & playgrounds suited for all age ranges are integrated alongside a Biome's natural spaces – ensuring a profoundly interactive experience that promotes wellbeing and offers far higher return over traditional 'one-and-done' rides and exhibits.

From low to high adrenaline, activities get visitors' bodies moving and hearts pumping. Climbing walls, aerial parks, swings, slides, water parks, zip lines, abseiling and rock climbing – even indoor skydiving – are all possibilities.

Physical activities, sports, rides, games and attractions from all over the world can be integrated into the overall Biome destination. Not at the mercy of the weather or geographic restrictions, we can replicate the right conditions and environment for everyone to have fun and be entertained all year round.

↳ 3. LIFESTYLE & WELLBEING

catering to every need



The role of self-care and social activity for the general wellbeing of people and communities is an important consideration within Biome design. To serve and foster these needs, we address the common expectations and demands of contemporary visitors. Incorporating retail, hospitality, health and wellbeing spaces throughout, opportunities to connect, indulge the senses, and enjoy modern day luxuries are abundant for patrons to enjoy, all while supporting a sustainable business model.

From fine dining and day spas to the latest in fashion retail and cafes, social needs and wants are well considered to give visitors every possible opportunity to deepen memorable, shared experiences and nourish themselves inside and out. A sense of community and opportunities to connect are also fostered.

Restaurants and bars can even integrate with natural habitats, growing fresh produce on-site and benefiting from the surroundings and decor. Depending on the project, when it is time to get down to business, professional services and conference facilities may also be considered, offering alternative and diverse income streams.

↳ 4. EDUCATION & CULTURE

leading through example



Education is always most effective when we can relate teachings to context and experience. Biomes provide exactly that with their ability to house and display any number of natural habitats, learning environments, and educational opportunities. Not only does this benefit the general level of education and knowledge for children and adults alike, it also goes a long way to benefitting the environment and acknowledging local culture.

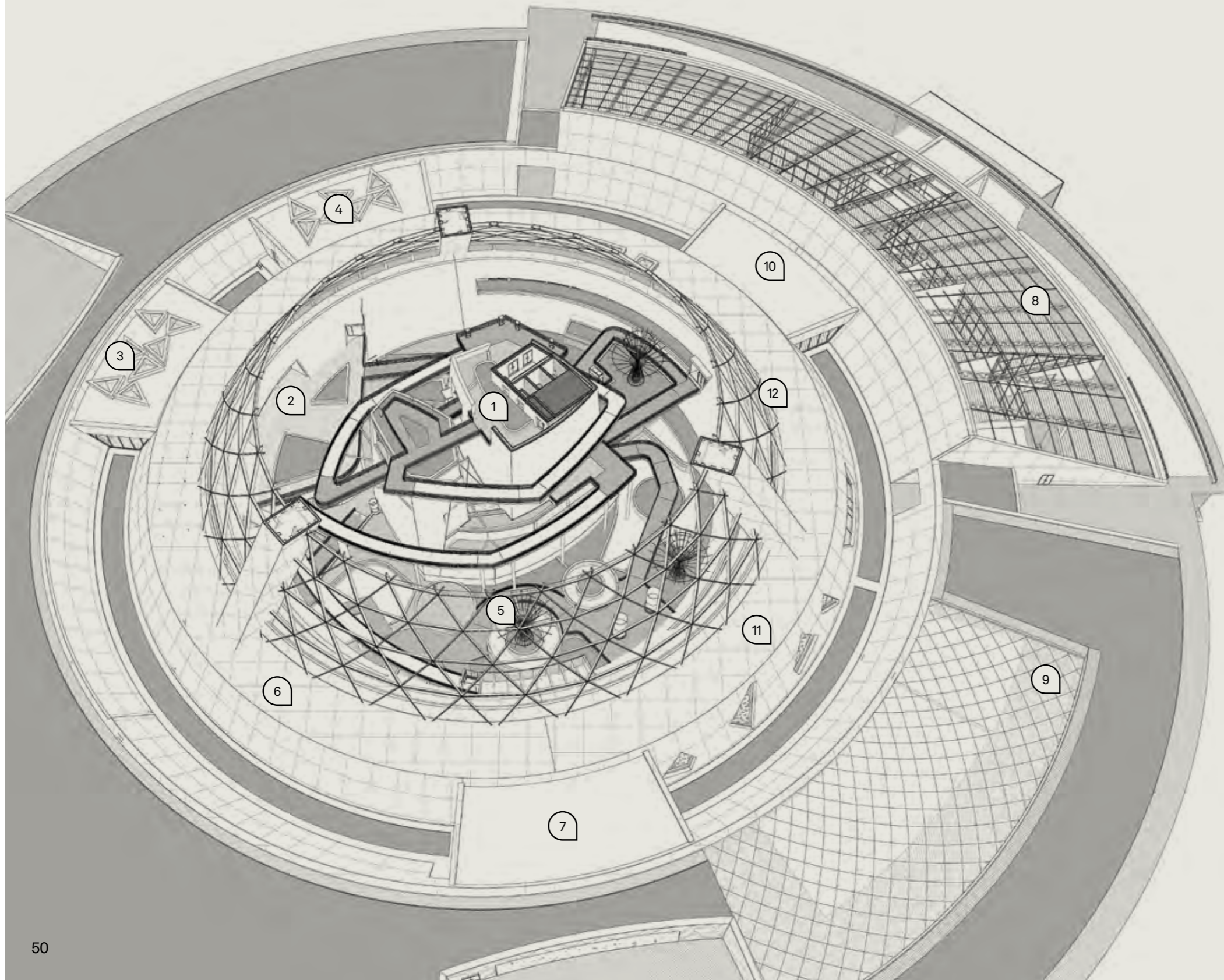
Research into conservation management is now showing that the more connected to the natural environment people see themselves as being, the more likely they are to take action to protect it.⁸ Education plays a vital role in addressing our urgent environmental challenges. Education, along with direct interaction with nature, is an integral aspect of experiences within all Aquamarine designed Biomes. Biome systems can also contribute back to at-risk natural environments through onsite research, breeding or cultivation initiatives.

Alongside education, culture and all it encompasses plays an important role within Aquamarine's Biomes. The cultural complexity and diversity of our world is worthy of celebrating, and local history, customs and traditions across the globe offer fascinating opportunities to showcase unique regional highlights through educational facilities and touchpoints.

Our first Biome, Yaranga Gardens puts nature at its core, literally, with large central gardens encircled by educational, social and cultural facilities, incorporating all four of our Biome pillars deeply within the design and execution.

Yaranga Biome ↳ Key Features

1. Garden core with exhibits
2. Entrance to gardens
3. Main entrance
4. Penguin exhibit
5. Indigenous cultural centre
6. Cafe
7. Greenhouses
8. Technical services
9. Lecture & education suites
10. Function centre
11. Administration
12. (Unlabeled feature)





“Through Biome design, our goal is to create immersive and engaging spaces where people become participants and feel as part of the world they’re learning about, not simply observers.”

Nicholas Traviss

↳ Aquamarine, Owner/Director

Human

- ↳ Enhanced wellbeing
- ↳ Increased physical activity
- ↳ Environment education activity
- ↳ Shared experience
- ↳ Fulfilling activities

Environmental

- ↳ Environment awareness
- ↳ Habitat conservation initiatives
- ↳ Sustainable ecosystem design
- ↳ Research and learning
- ↳ Corporate environmental leadership

Business

- ↳ Enhanced dwell time
- ↳ Educational partnership opportunities
- ↳ Tourism boost to business and community
- ↳ Increased return visitation
- ↳ Diversified revenue streams



It's in the trees

In Japan, the practice of shinrin-yoku (forest bathing) is celebrated as an antidote to the modern urban lifestyle and its associated stressors.

Even the romantic notion of 'forest bathing' may have a scientific basis. Research indicates it could be the 'phytoncides' given off by the trees as a defence mechanism, that offer health benefits.⁹ Phytoncides are organic compounds (present in many plants, including garlic and onions) which have powerful antibacterial properties. Other studies show that the 'aerosols of the forest,' when inhaled, may cause heightened 'NK' (Natural Killer) cells in the immune system (helping our bodies' natural defences).

Science is now starting to indicate links to what we intrinsically know, that spending time in nature is good for us. Studies are showing links to not just emotional wellbeing and improved mood, but also to feelings of calm and empathy, and even to physiological benefits such as reduced blood pressure, muscle tension and lowering of stress hormones such as cortisol, reduced risk of diabetes and cardiovascular disease.⁷

There is even a 'magic number' – with studies indicating that benefits are seen after at least two hours a week spent immersed in natural settings. After that, the benefits extend even beyond the individual – with links to greater 'community cohesion' and benefits such as lowered crime rates.¹⁰



Nature's Biomes

↳ Our inspiration

Learn even a little about some of Earth's incredible natural environments and you'll see why we've made sharing this knowledge our life's work. Forests, Wetlands and Oceans are all biomes of the natural world. Unique and incredibly diverse, all three have vital functions that support the equilibrium of our environment.

Forests

Sometimes called the lungs of the Earth, forests like the Amazon rainforest of South America, and the Boreal Forest or the Taiga in Russia are some of our most precious earthly treasures and a major player in carbon sequestration.

↳ **Rainforests are Earth's oldest living ecosystems, with some surviving in their present form for at least 70 million years.¹¹**

↳ **Boreal Forest – also known as snow forest, or in Russia, called the Taiga – grow in high northern latitudes, including in Russia, Mongolia, Japan, Norway, Sweden, and Scotland.¹²**

It is comprised of mainly coniferous forests, and while less well publicised than rainforest, it is equally important for carbon sequestration.

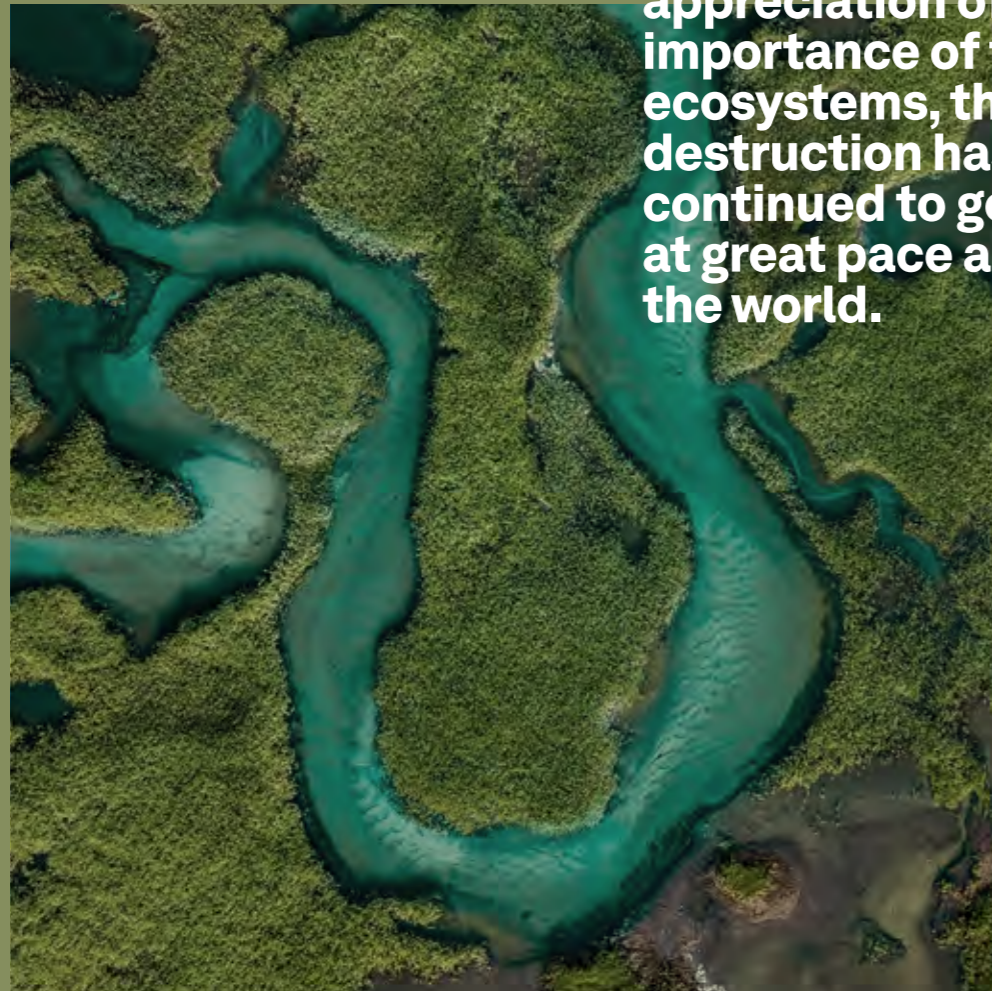
↳ **Russia's boreal forests make up the largest forested region on the planet – even larger than the Amazon (12M km²)¹³ and as such a crucial asset in protecting Earth's climate. The biome is 50N latitude.¹² It is the largest 'terrestrial biome' on Earth.¹⁴**



Wetlands

A much under appreciated ecosystem, which, in keeping with describing forests as the Earth's lungs, could be described as the kidneys of the Earth.

- ↳ **Among other benefits, wetlands play a vital role in cleansing water systems, protect coasts against flooding, and support a huge array of unique flora and fauna, including many endangered birds, insects and more.**
- ↳ **In Aquamarine's home country New Zealand, we have now lost more than 90% of our original wetlands.**
- ↳ **Without broad public understanding and appreciation of the importance of these ecosystems, their destruction has continued to go on at great pace all over the world.**



Oceans

Long the foundation of Aquamarine's business and our passion. Oceans are Earth's biggest carbon sink.

- ↳ **Our oceans' ecosystems are highly vulnerable to a changing climate, with global warming and acidification having a devastating effect already on fragile environments such as coral reefs.¹⁵**
- ↳ **Presently, oceans are CO² sinks, and represent the largest active carbon sink on Earth, absorbing more than a quarter of the carbon dioxide that humans put into the air.¹⁶**



Indigenous Wisdom & Kaitiakitanga

Traditionally, Māori believe there is a deep kinship between humans and the natural world. All life is connected. People are not superior to the natural order; they are part of it.¹⁷ This belief goes a long way to explaining the great reverence the Māori people have for their whenua (land), and the environment as a whole.

Kaitiakitanga means guardianship and protection,¹⁷ and has come to describe how the environment is managed based on the Māori world view (Mātauranga Māori, or Māori Knowledge) – and has even been incorporated into environment legislation in New Zealand.

Responsibility for protection of the land runs deep in traditional cultures the world over. Recognition of these values is in resurgence, accompanied by an acknowledgement that preservation and restoration of our ecosystems and cultural heritages go hand in hand.





Nicholas Traviss

↳ **Aquamarine**
Owner/Director

No stranger to change, Nicholas has transformed Aquamarine several times over since taking on the company his father Bobby started in 1972. In fact, he sees adaptability as the heart of the business itself, evolving to meet diverse markets, and new horizons.

“A holistic viewpoint has always been central to what we do at Aquamarine – looking at, and adapting to, all the interconnected parts of a situation.” Nicholas says.

“On a personal level, it’s what keeps it interesting and fun. On a professional level, it’s what enables us to succeed.”

“This approach runs deep through our design philosophy and our cooperative approach to work. It’s all about being responsive to context, and open to opportunity, and is part of what makes the work we do so rewarding.

This has been the case since the company’s early days as an architectural firm delivering residential and commercial work in New Zealand’s far North, through to its growth into a specialist consultancy in commercial aquariums through the ‘00’s. Now, as Aquamarine spreads roots across the globe, expanding into large scale entertainment development, it’s even more relevant.

“Working this way gives us the chance to open our eyes to other cultures and ways of working. And the chance to forge friendships, partnerships and collaborations all over the world.”

As recent events have unfolded across the world, namely COVID-19’s global impact, the importance of adaptability to operating a successful business has been clear. Remote collaboration has also taken centre-stage, highlighting how our communities and businesses can remain interconnected, locally and globally, even when physically separated; something intrinsic to Aquamarine’s operations already.

“If the past year’s global events have shown us anything, it’s that change is inevitable, and it’s through collaboration and working together that we overcome obstacles and move forward. If we let fear or denial paralyse us, we reduce our ability to respond, and our ability to see the opportunities that change might bring.”

Aquamarine is by no means finished evolving yet. Nicholas is using this same foresight to spearhead a new direction for the entertainment design sector, one that champions the interconnectedness of human wellbeing with that of our environment, and that challenges the industry to do better, to be better, and operate with greater conscience.

For Nicholas, it’s a vision that is close to his heart. Living on the outskirts of Auckland in New Zealand with his wife and three children, he experiences daily the benefits of living close to nature. And he is serious about protecting it, partnering with New Zealand’s Department of Conservation and with local Iwi to establish a protected reserve for the 400-year-old native forest near his home, ensuring its preservation in perpetuity. The old forest also offers a cultural treasure, as a backdrop for local film and television projects.

“For me, it’s all about approaching things in a way that means we are designing for the lives, businesses and world we aspire to have in the future, not to meet expectations based on what has been done before.”

To learn more about Aquamarine’s vision for the future of entertainment design, read about Biomes on p38.



VGP Marine Kingdom

A new national standard breaking new ground in India.



↳ Chennai, India:



“Working on projects of this scale and complexity, one thing you learn is that patience and persistence pay off. During a long pause while the client sought funding, we used the time to improve and build on the concept, and never gave up on the hope of bringing this project to life.”

↳ **Nicholas Traviss**
Aquamarine Owner/Director

This international-tier project is India’s first and largest public aquarium, designed to the highest standard in ecosystem reproduction with combined education and sustainability programme offerings.

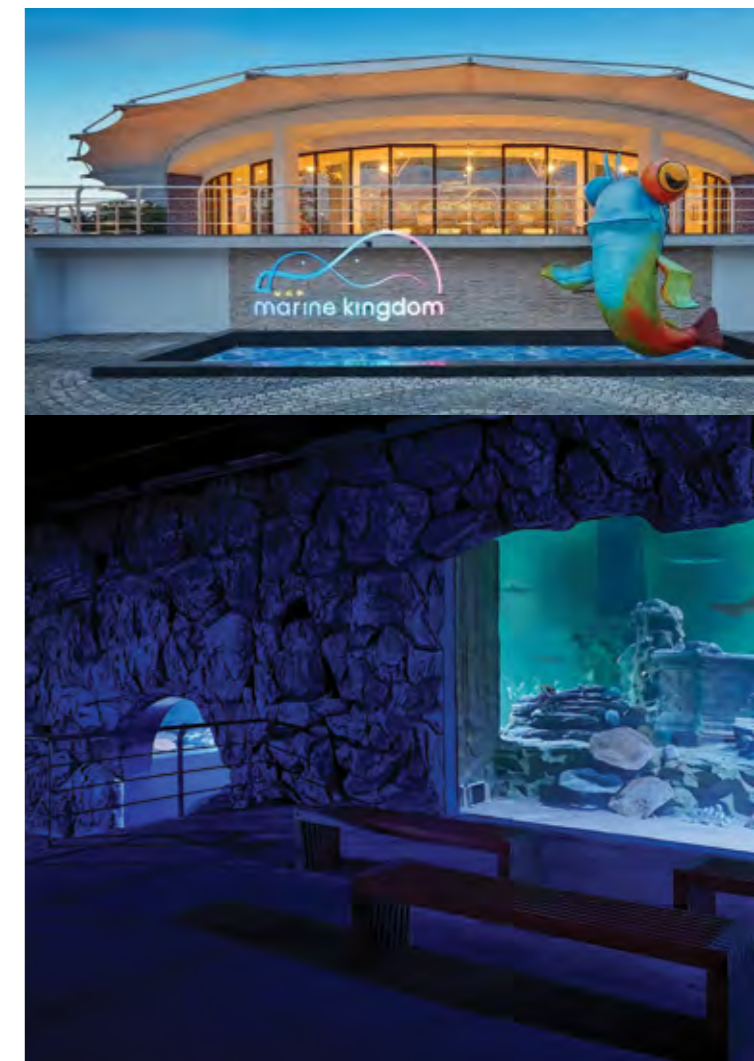
Working with Marinescape, a long-time member of the Aquarium industry, we undertook the roles of Project Architecture, Interior Design and thematic journey design. With design adhering to a storyline that we developed in conjunction with Marinescape, the resulting development achieves an immersive and entertaining space with a diving school, exhibition and dining spaces, nature-interactive experiences and educational opportunities.

Starting in 2012, we undertook an exacting process where several concept designs were explored before a final approach was selected and commissioned – ensuring a world-standard experience for Chennai’s new destination.

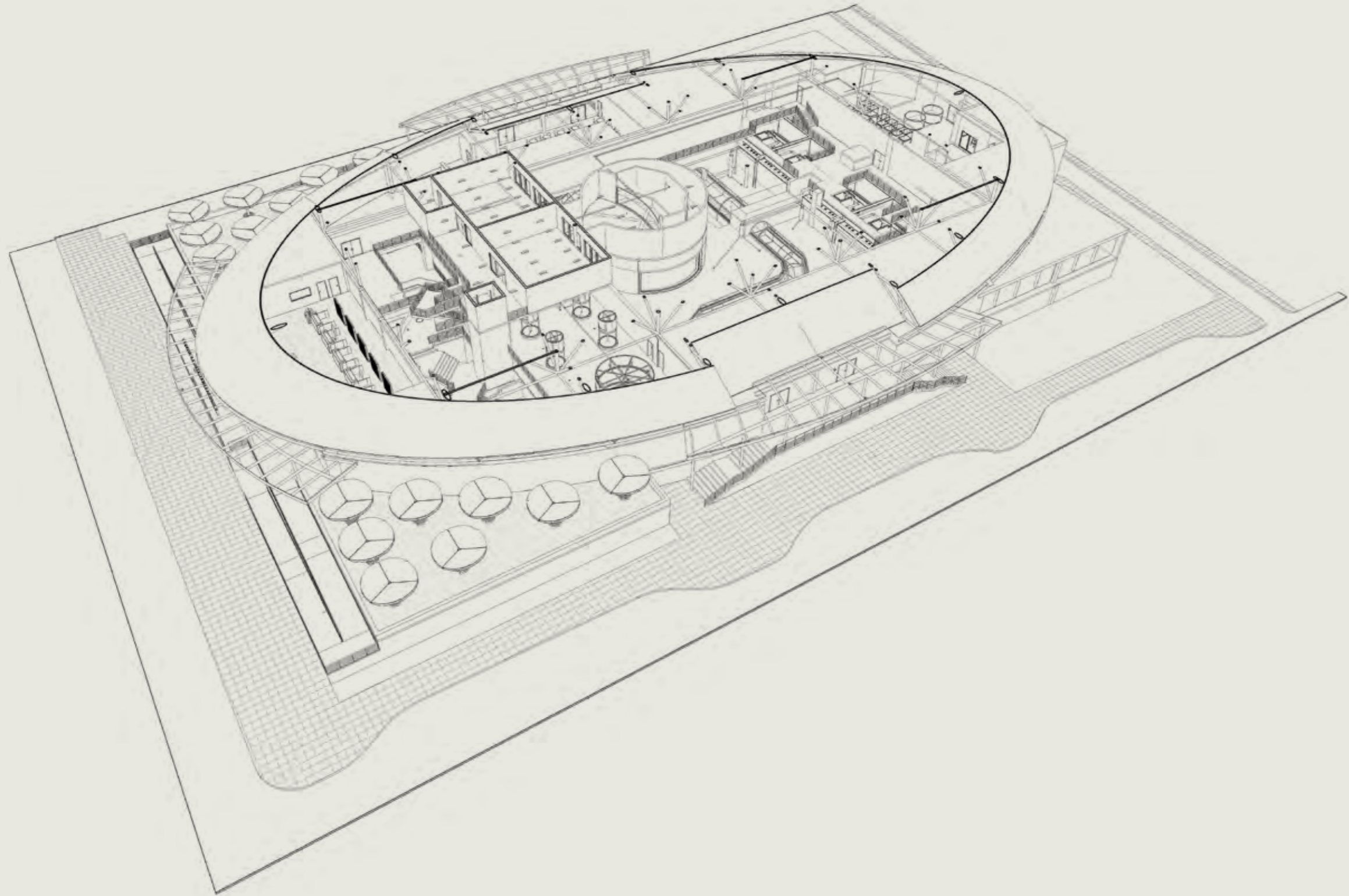
Set in the VGP World Theme Park in the resort area of Chennai, the aquarium will serve the dual purpose of entertainment and education. It includes impressive features such as a 70m long underground tunnel and 35 exhibits of deep-sea species with panoramic views.

As India’s first major commercial public aquarium, this was an exciting milestone for the aquarium community and for citizens of India too. It paved the way for other aquarium projects to begin in the nation, such as the new Gujarat Oceanarium in Ahmedabad.

- ↖ The 70m long underwater tunnel at VGP Marine Kingdom.
- Designed from the concept of a seashell sitting upside down, our objective was to create an open façade where people from the street could see something interesting inside (a peek of rainforest), enticing them in, while also offering something to those just passing by.
- For the large public aquarium tank, we applied a successful approach used previously at Turkuazoo (Istanbul, Turkey), creating a panorama tank with two windows.



↳ From this aspect the seashell shape of VGP Marine Kingdom's roof is visible – a tension-membraned structure – while it also highlights the complexity of a large public aquarium.



This is Chennai

01

Chennai was known as Madras until 1996.

02

A flagship city in many ways, Chennai is known for food, film, tourism and health tourism, and its mix of modern and traditional cultural features.

03

Chennai's coast to the South is a hatching ground for endangered Olive Ridley sea turtles.

04

Chennai has many nicknames

- ↳ India's Health Capital
- ↳ Detroit of South Asia
- ↳ Gateway of South India
- ↳ City of Flyovers
- ↳ Banking Capital of India

05

Chennai's wetlands, rivers and lakes face significant pressures from urbanisation. Climate change and other environmental pressures are priming new conservation initiatives and environmental awareness in the area, presenting opportunities to initiate conservation programmes at the aquarium.



Jon Sim

↳ Aquamarine

Lead Feasibility Specialist and Chief
Financial and Operations Manager

Start anywhere, look everywhere. At Aquamarine, initial project briefings can often be as vague as a fleeting thought from a client, or as broad as an idea for an entire region re-imagined. With a background as a geologist, and a Chartered Accountancy qualification underpinning and informing his deeply layered and analytical approach to feasibility assessment, Jon makes sense of it all.

Whatever the initial brief is, Jon takes what he calls a 'bottom-up' approach. "The starting point for me is always to explore the social, cultural and political landscape as deeply as possible. How do the people here live, work and play? I work on challenging, always, to 'prove it' – I know it works when I see it's going to work".

Our approach to feasibility combines methodical structure with fluidity. Always starting with a base process to assess competitors, demographics, population profile including local, international and tourism stats – we get our hands on as much information as possible then apply our tried-and-true methodology to it. Then, there is the intuitive layer of observation and response to local contexts, combining common sense with those leaps of insight that come from deep questioning.





↳ **Completion is just the beginning.**

We treat client partnerships as long term investments in collaboration. From concept through to operation, we design with the future in sight. Offering our clients complimentary check-ins down the track to optimise, assess and ensure success, we're in it for the long haul on all our projects.

Working with history, and the landscape



↳ Lima, Peru:

A unique historical, political and geographical context make this current project truly one-of-a-kind.



Over centuries of flux, involving population growth, civil unrest, and rising and falling power dynamics, the urban landscape of Lima, Peru has continually evolved. Nowadays, Lima's city centre further inland has started to give way to the flourishing Miraflores area closer to the ocean. As new business and tourism thrives by the sea, the population has increased, and development and infrastructure alongside it. We were briefed to design an aquarium complex to serve the growing population of this vibrant area.

The cultural and historical context of the region inspired our design concept for the new aquarium, drawing reference from the Sacred Valley of the Incas – the Urubamba Valley in the Peruvian Andes. This is seen in the dominant circular shapes of the concept.

In the aquarium itself, visitors will be guided on a journey, discovering a new world inspired by the old. Designed to provide the element of surprise and a sense of discovery from beginning to end, architectural layout, exhibit design and storytelling converge to create a seamless experience.

With interactivity at the heart of the concept, living aquatic habitats – both salt and fresh water – are complemented by informative displays and exhibits themed to suit each carefully curated discovery zone.

In the aquarium's design, we've given careful consideration to every aspect of a person's journey through the facility – from taking into account the flow of foot traffic, to building an educational and emotional journey. With knowledgeable guides staffing the centre, and detailed informational displays, visitors will fully immerse in enjoying and learning about these wonders of nature in a personalised way.

As the project comes to life, it will be engineered to work with the awe-inspiring natural landscapes of the Miraflores coastal environment's cliffs and beaches.



↶ The circular motif inspired by regional architectural relics is evident in our design.

↑ The ancient ruins of the Sacred Valley of the Incas – our reference point for concept design.

↑ Sitting right on the beach, the aquarium is a new development situated on old and disused sports grounds. While impressive, the ground-level view is deceiving – with underground exhibits comprising most of the 15,361sqm design.



Good things take time.

Lima Aquarium is still in development – and while it has by no means been a simple project, it has been a labour of love and learning. Through the hundreds of projects we’ve completed, it comes as no surprise when hurdles – from the personal to the political to the financial – arise. Lima has been no different. As large-scale planning projects often can be, getting the Lima Aquarium development underway has been a long slow road, but one we know will be well worth it, once it has come to fruition. Navigating the way through is just part of the process.

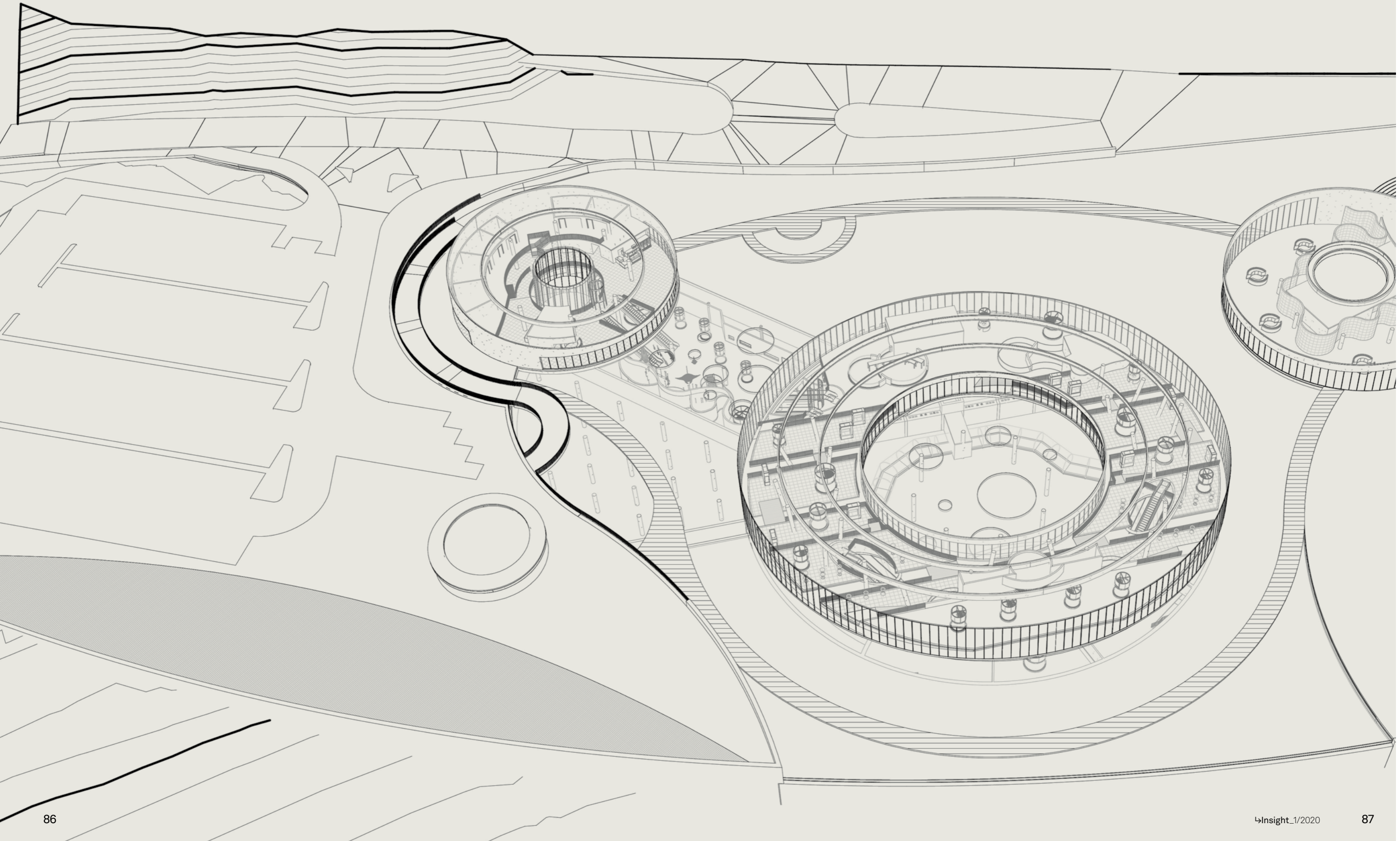
Our faith in the concept and purpose of this work remains unwavering, underpinning our commitment to seeing the project completed. When the project is done, it will offer an unmatched opportunity for Peru, helping to make its capital city a landmark destination. As Nicholas Traviss says:

- ← The main structure sits over a reflection pool, designed to reflect the building and the sky, with views from the cliffs above offering a mirror view of the sky.
- ↙ A boardwalk extends over the reflection pool, which overhangs the ocean.



“Much of the incredible wildlife of South America is relatively little-known, and the aquarium is a chance to hero how special and unique that wildlife is. It will not just bring something special to the people of Peru, but help to bring something of Peru to the wider world.”

↘ A birds eye view shows the ring structure of the concept, and a clear view of the top layer with a large working area where everything happens underground.





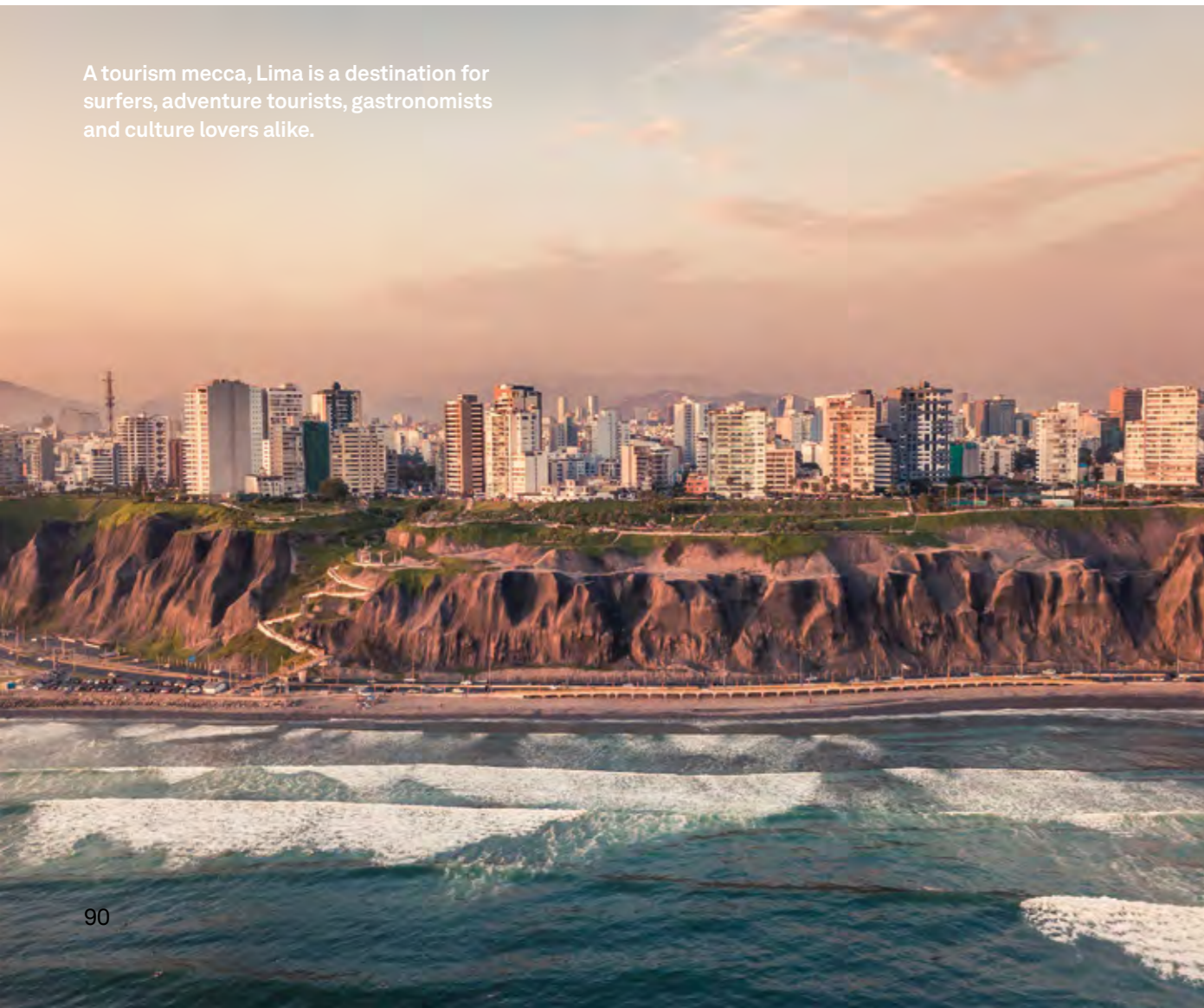
15361

m² Aquarium
Development
Total Area

10M

Lima is Peru's capital,
and one of the largest
cities in South America
(home to 10 million of Peru's
30 million population)

A tourism mecca, Lima is a destination for surfers, adventure tourists, gastronomists and culture lovers alike.



Engaging Visitors, 5 Key Principles

- 1** Engage all 5 Senses → different people work in different ways. By engaging all the senses we can create more lasting impact and deeper memories.
- 2** Touch both hearts and minds → good stats and information allow for a deep experience, but tapping into our emotions is important too. Our goal? To create experiences that make people smile, laugh, remember, and tell their friends.
- 3** Foster community → community is vital to any project's success, creating a sense of place for both visitors and staff so that they 'own' the project, at its completion. Staff engaged in this way deliver superior customer experiences, stay longer, and are happier. Visitors who connect at this level are more likely to return, as well as share their experiences and encourage others to visit.
- 4** Build a sense of wonder → Projects that offer a truly impactful experience and make deep connections often incorporate elements of surprise in discovering something new. This type of storytelling and experience design should be a cornerstone in the inception of any project.
- 5** Know our audience → building a deep understanding of our audience is critical to the success to any project – from operational success due to accurate feasibility planning, to the experience itself.

Nicolas & Suzanne Burger



↳ **Collaboration across borders**

Where international borders, cultures, languages and time differences are just everyday occurrences, Aquamarine and its trusted network of specialists around the world prove adaptability and communication is king.

With clients spanning almost every continent, Aquamarine consistently emphasises building a group of like-minded professionals across the globe to support their vision. With the combined knowledge and technical expertise this approach enables, Aquamarine has displayed an unprecedented ability to interpret the needs, contexts and business cases of their international clients, and in turn, produce sustainable, inspiring and change-provoking solutions.

Nicolas and Suzanne Burger are two core members of that team.

Granted a contract to work on the Kogalym-based Galactika project while spending time in New Zealand, the husband and wife team from South Africa brought significant design and project management experience, but were new to international entertainment centre projects of such scale. Still, it certainly didn't slow them down."

Graphic and interior designers respectively, the duo are incredibly adept at thinking on their feet. Responsible for interior design, graphic design, brand, customer journey/experience, exhibit theming and technical drawings, their detail-orientated nature has proven invaluable in executing Nicholas Traviss' uncompromising visions.

For many, the scope of Aquamarine's projects would seem daunting; however, to Nicolas and Suzanne, these projects embody a 'dream job'. As Suzanne explains, "Nicholas Traviss bestows a great deal of trust upon us, granting us creative freedoms and responsibility we simply couldn't find elsewhere."

Often international in context, conceptual in nature, and every one unique, she reveals that Aquamarine projects consistently grant them rewarding and challenging experiences that are seldom matched.

"We also have the opportunity to make a positive impact on people's lives through our projects," Suzanne

adds. Highlighting the community-focussed Galactika project, Suzanne outlines how meaningful this was for the team, as they took great delight in the ability to build learning and educational experiences for children and adults alike, throughout. Experiences they would otherwise go without, in such an isolated location. "It makes our work incredibly rewarding."

Now back in their homeland, the pair continue to support Aquamarine's fully-fledged global operation. With a portfolio of international clients and projects, a working team positioned near the central meridian proves invaluable to ensure around-the-clock responsive operations and service. The work from home benefits and freedoms aren't all that attracted Nicolas and Suzanne to Aquamarine however, as Nicolas explains:

"A significant driver of Aquamarine's success is our teams' innate appreciation and consideration for cultural diversity, and their ability to apply this to our projects. Being South African, from a nation defined by its wide variety of cultures and languages, this same skill and appreciation comes naturally to Suzanne and myself. It's something we've been passionate about, and with the scope of Aquamarine's projects we could incorporate that into our work at a completely different level."

This welcoming approach to different cultures and perspectives is strong across Aquamarine's network, and has better prepared the company to adapt and readily overcome the challenges that typically arise across international borders, while capitalising on opportunities that are presented. As Nicholas Traviss says, "From the people that walk through the doors of a completed centre, to those involved in concepting ideas at the start, everything we do is about human minds and hearts. Nicolas and Suzanne exemplify exactly how it is the people involved that make a project succeed."

Zero Assumptions

At Aquamarine, every project starts as a blank page. We're open to being proven wrong, and during initial feasibility studies, we turn over every stone and ask every question before we build a recommendation.



Russia's Vanguard for Social Enterprise

↳ **Vagit Alekperov and the Our Future Foundation: championing Social Entrepreneurship in Russia**

After working for many years now with Vagit Alekperov through our projects with LUKoil, we have come to see the dedication he has to people, communities and social conscience. We have been inspired by observing the impacts of his social proactivity.



↑ Briefed by our client Mr Vagit Alekperov to create a building using the LUKoil logo, we achieved this aesthetic challenge via a birdseye view.

Personally involved in many initiatives to improve communities (including Galactika in Kogalym), Mr Alekperov is providing the leadership in action that we need from those most fortunate among us. Foremost of his initiatives is the Our Future Foundation that is financed from his personal means. But first, a little about the man himself.

Amongst Russia's (and the world's) wealthiest and most influential men, Vagit Alekperov has already built a staggering legacy in leadership. Devoting his entire career to the energy industry, Mr Alekperov rose from working on the rigs, to become the youngest deputy energy minister in Soviet history, and following that, was instrumental in the formation of LUKoil. LUKoil is one of Russia's largest companies, and a global player in the oil industry. Mr Alekperov has been LUKoil's president since its founding in 1993. He is the fifth-wealthiest man in Russia (Moscow Times), and 55th in the world (worth approx. US\$21.4 billion as of June 2020, according to Forbes). With such impressive resources at his disposal, he is in a powerful position to lead change for communities in Russia. And this combination of social responsibility and commercial wisdom is not going unutilised.

In 2007, Mr Alekperov founded the Our Future Foundation for Regional Social Programs, or the 'Our Future Fund'. The foundation dedicates itself to fostering, supporting and promoting social enterprise in Russia.

Their mission is to act as a catalyst for positive social change in Russian society, promoting social entrepreneurship by providing support and financing to organisations focused on societal problems and solutions. Through "Social Entrepreneur" awards, the Fund offers interest-free loans to new or existing businesses within social entrepreneurship. The Fund's focus is on providing financial support to projects aimed at solving pressing social problems.

The Fund's Director, Natalia Zvereva says "Social entrepreneurship is an innovative approach to the problems of society. From the very beginning, we decided that we would support projects with loans, not grants, because a social entrepreneur should be able to make money. An entrepreneur's task is to create and develop a sustainable business that can consistently fulfill its main mission – to solve a particular social problem. The objective of the Fund is to help it during formation, development and expansion; and we use returned funds to support other social entrepreneurs."

"We are not limited only to financial aid, but help social entrepreneurs comprehensively – we provide information and consultation support, and develop educational projects. It is gratifying to see the community of social entrepreneurs growing every year."



To date, the Fund has awarded almost US\$10 million in interest-free loans, across 255 projects in 58 regions.

Through the interest-free loans, the foundation has supported social organisations in many different areas, such as:

- ↳ Kindergartens, including those for children with special needs.
- ↳ Companies rehabilitating physically challenged people.
- ↳ Museums and organisations, preserving traditional arts and crafts.
- ↳ Organisations providing care for elderly people.
- ↳ Organisations that employ people from disadvantaged groups.

The Fund, together with LUKoil, has also launched the “More than just a Purchase!” project to help social businesses to reach larger markets. The project sees products made by social enterprises being sold in convenience stores at gas stations.

The Laboratory of Social Entrepreneurship operates under the Fund. It conducts webinars and thematic courses, and “Growth Formula” acceleration programmes across Russia. First held in 2018 in the Kaliningrad region, its initial 16 graduates managed in just 1 year to create 68 new jobs, increasing their average annual turnover by 31%, and the social effect of their activities by more than 40%. The second accelerator program was launched in the Nizhny Novgorod region and is nearing completion, to be followed by the 2020 program in the Astrakhan region.

The Foundation also publishes its own, and translated, literature, maintains “New Business: Social Entrepreneurship” information and an analytical portal, develops educational programs and legislative initiatives in the field of social entrepreneurship, and holds forums and meetings.

Social entrepreneurship is an exciting direction for the country, now formally supported by Russia’s government leaders since 2019. Each year more and more businesses are engaged in it, allowing social problems to be resolved faster and more efficiently. The Our Future Foundation looks forward to supporting the process.

Force for good:

The foundation holds the “Force for Good” awards to recognize stand-out performers in social enterprise in Russia. These awards are for social entrepreneurs, NGO representatives, government institution heads, media and educational institutions.

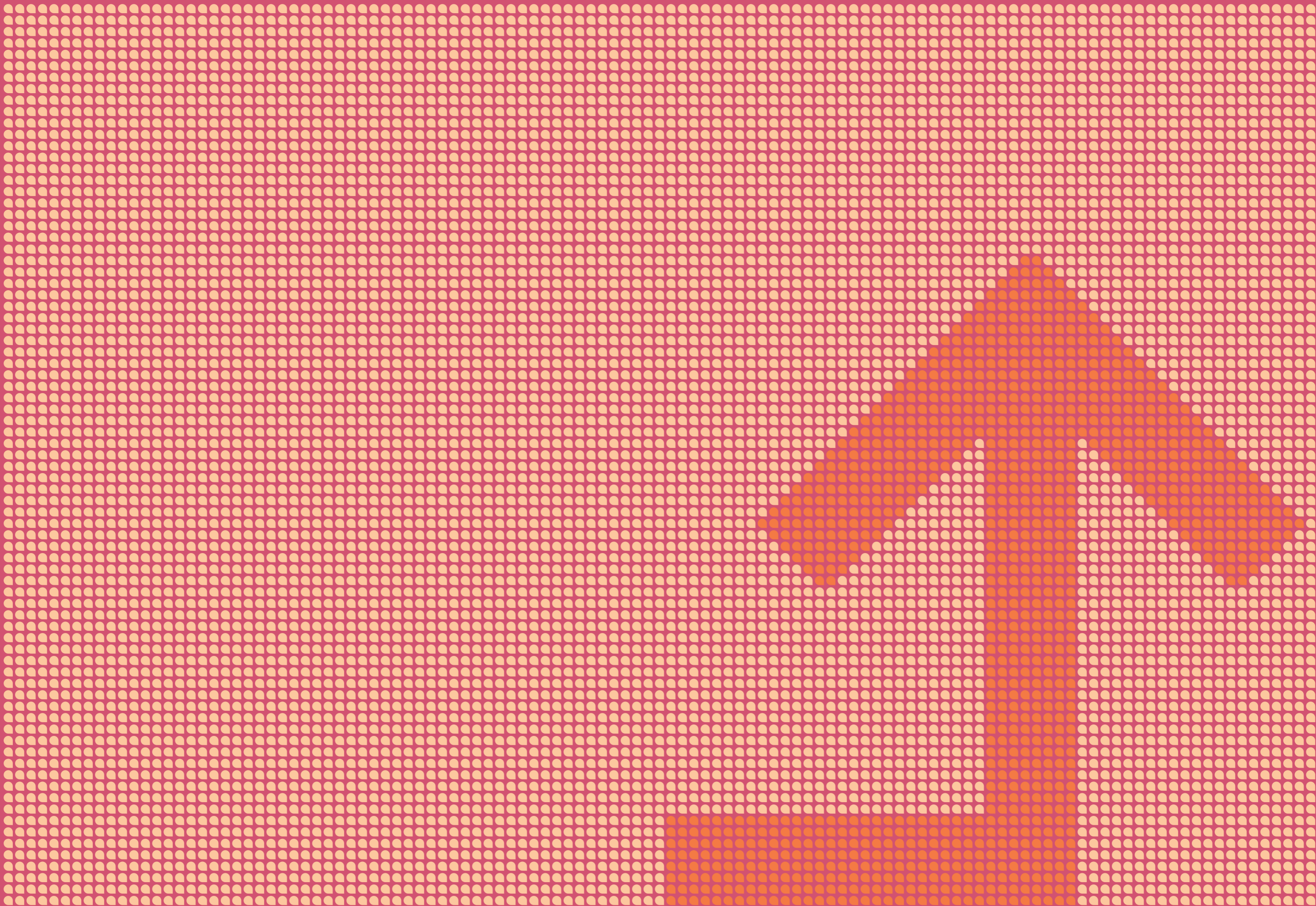
Award holders of 2019 are projects that offer innovative solutions for social programs and inspire others by example. One of the winners in the “Personal Contribution in Social Entrepreneurship Development” is George Lein, who has developed and manufactured special spinal supports since 2006. In 2014 he started a new full-cycle prosthetic-orthopaedic centre (scoliologic.ru) that also produces orthopaedic apparatuses, prostheses and offers psychotherapeutic support for patients. They have 6 branches in Russia and one in Estonia.

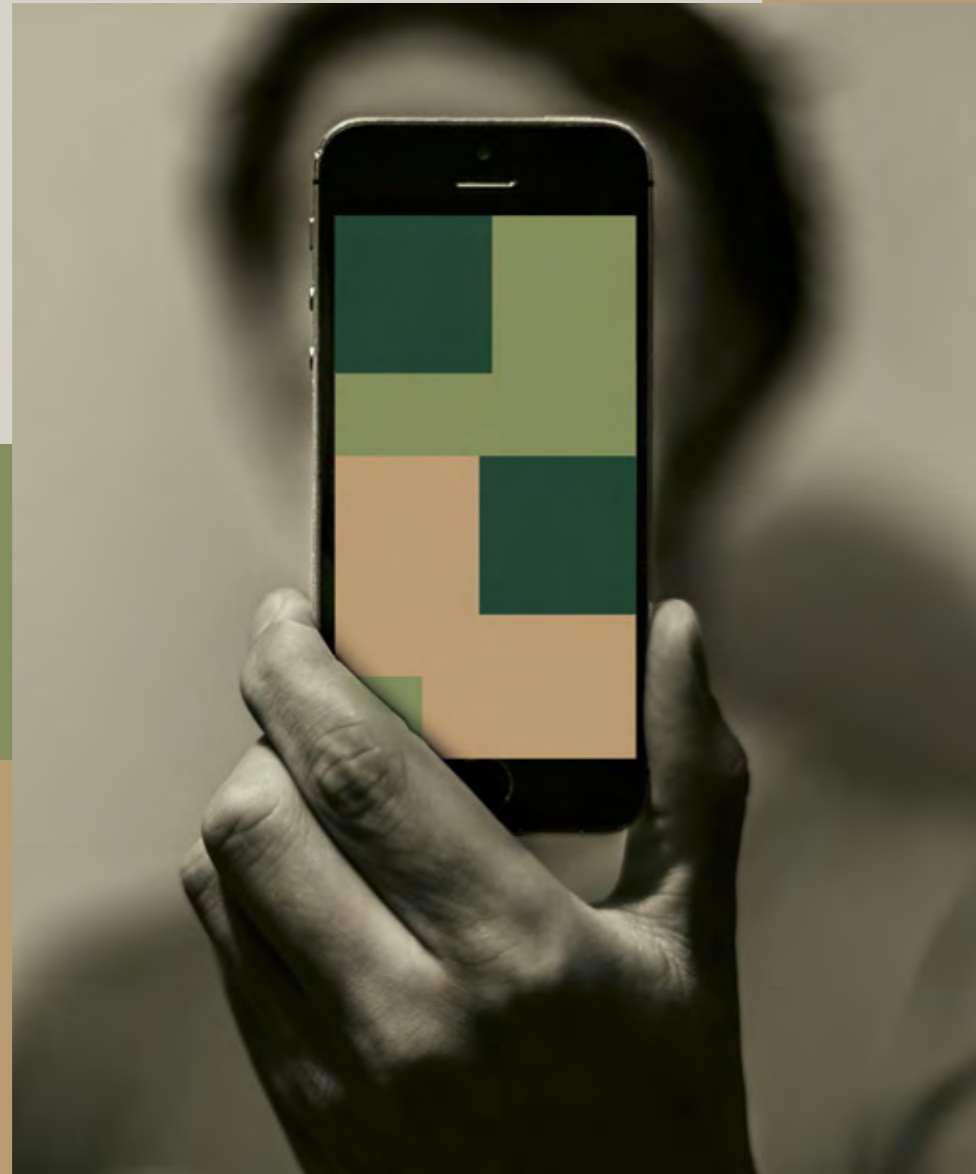
“Earlier in all interviews and press conferences I was asked only about the oil market and LUKOIL’s industry projects, but now I am asked more and more about social entrepreneurship. It is no longer a novelty, and now many of the projects that the “Our Future” Foundation supported at the very beginning of the journey are moving to a new level, becoming large organisations launching franchises and opening branches in new regions.

When we realised that social entrepreneurship had reached a new stage of development, we decided to take the next step – we started to form a pool of impact investors: those who are ready to invest their money in a social business, prioritising its potential social effect over high profitability.

We live in a time of change in social formation, when people value their own efforts not only financially. Gradually, we move to a world where every business will be a business “for people.”

Vagit Alekperov
↳ Founder, Our Future





Technology offers enormous benefits to our society. At Aquamarine it enables our dispersed global team to connect and work together in ways that wouldn't have been possible even a decade ago. Technology truly opens up the world to us. Yet, in today's digital age, it's all too easy to substitute a profoundly memorable experience with a photo of one posted to Instagram.

While there is no denying the incredible positives technology brings to our lives, we also believe it's all about balance. Our overuse of devices and social media is now being linked to increased rates of depression, anxiety, lower quality sleep, higher cortisol, and even to triggering obsessive behaviours and slowing down our thinking.

As we emerge from the enforced isolation being thrust upon so many of us worldwide in recent times, the value of real-world experience and real human connection in social spaces will be revived.

Our philosophy at Aquamarine is to foster those real-world experiences, inviting us away from our phones and into the moment – so we can truly see and experience the world with wonder, and with one another.

Projects as problem solving.

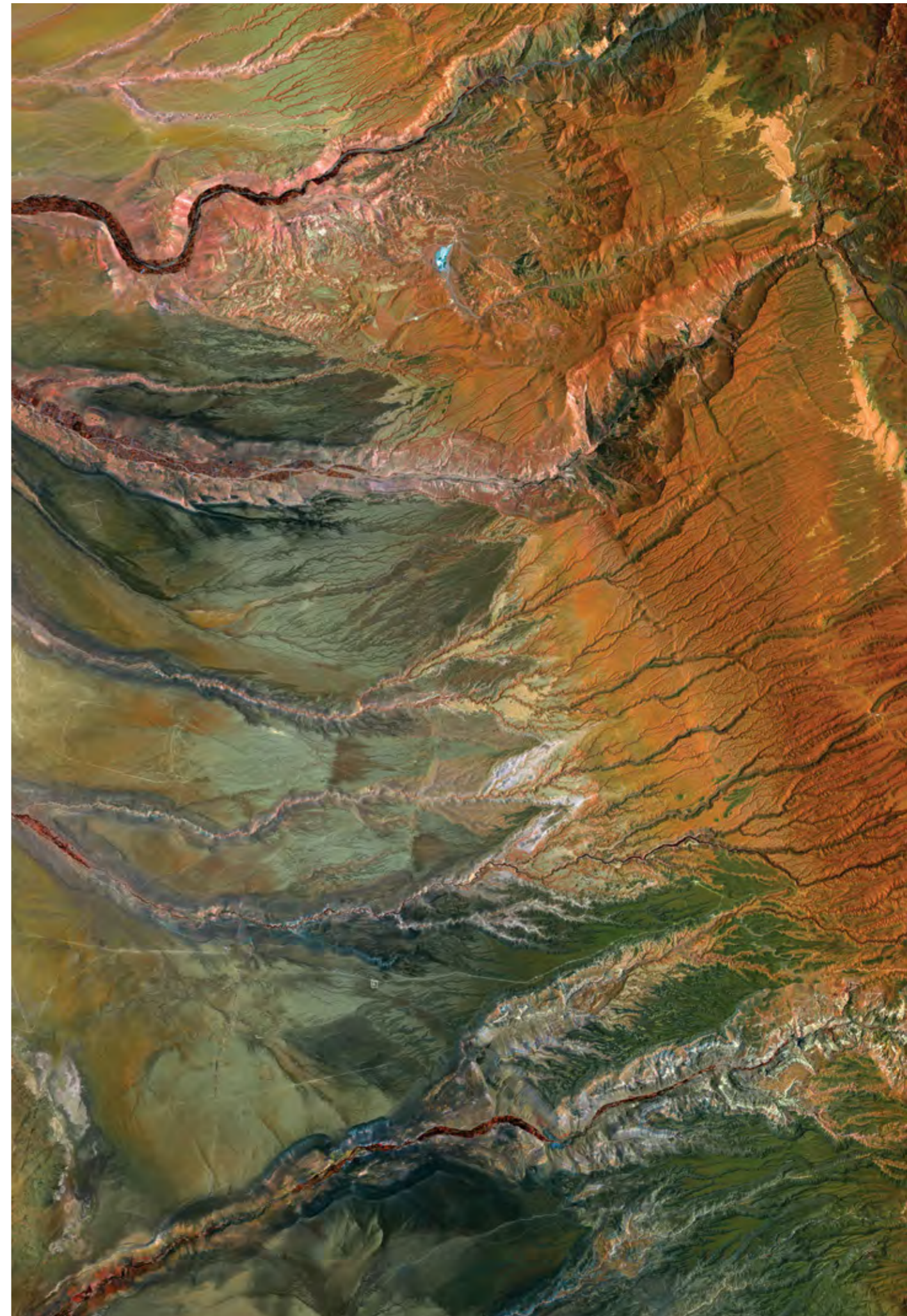
↳ REALISING POSSIBILITIES

The Project Journey – an adaptive roadmap

The projects we love best are those that present unique challenges and complex tasks to solve. So we believe in building problem solving into our processes at every stage.

Realising a project to its full potential is never a straightforward, linear process from concept to completion, especially at scale. But as is often said, seen in the right way issues can present opportunities. It is often in a project's hurdles, its twists and turns, that the most interesting ideas and insights appear. In fact, some of the projects we are proudest of were originally brought to Aquamarine as issues to be solved.

Within Aquamarine's methodology, structure and agility go hand in hand. Process sets the path, and agility helps us navigate the detours, all the while remaining laser-focused on our end goal. The destination – a project's vision – must remain true, but sometimes the route to get there requires a little adaptability (or a lot).



↳ 1. FEASIBILITY



The 'practical' place to start, feasibility is a crucial first step in many projects. This sets the context to understand how, and if, an outcome can be achieved and sets the framework for a project to be designed from. Good feasibility assessment can completely change the intended direction of a project, and can make or break its success down the line. This isn't just about crunching the numbers, and involves a multi-faceted approach with intuitive, observational and analytical components necessary to get the full picture.

“Building an entertainment destination is building an asset for its local community. We take that responsibility very seriously and want to create something that they can be proud of for years to come. Understanding the unique local context is paramount for that.”

↳ Nicholas Traviss

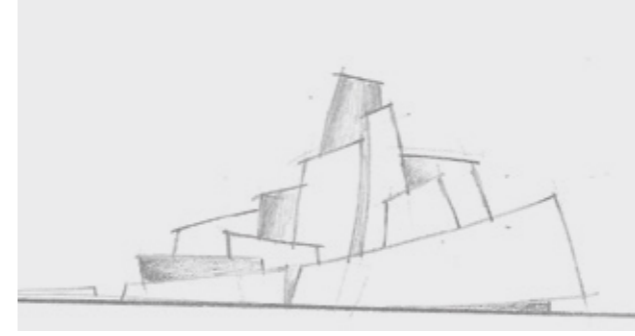
Case study → Proposed Botanic Gardens, Jakarta, Indonesia

When we were invited to scope an aquarium to be built in one of the many malls within the metropolis of Jakarta, we knew immediately that the context here was one-of-a-kind and would require deep investigation to understand how to best serve the region's population. Jakarta's structure has groupings of apartment buildings clustered around localised large-scale malls (of which there are more than 60). Each of these large malls serves its own surrounding population, acting as a community hub and creating a sort of 'city within a city'. As we delved into our exploration of the region, we observed that there were already many aquariums within Jakarta's malls, with many of them seen as too expensive, too elite, and too hard to get to, to be an attractive option for people of the region (sometimes meaning sitting for hours in the city's heavy traffic just to cross between parts of the city). We also observed that each weekend, the city centre itself would empty, as people dispersed into the countryside to seek the gentler pace and natural surrounds.

By observing the movements of the population, alongside Jakarta's existing infrastructure and feedback from within the community, it was clear that there was a far better solution than yet another inner-city aquarium in an upmarket mall. We recommended creating a multi-faceted destination at Serpong, on the city's Southern outskirts, that will include an aquarium, botanic gardens and a wider family entertainment centre, to offer a more accessible and inviting weekend attraction better suited to the needs of the people and more in keeping with behavioural trends.

Currently seeking investment to proceed, this project now has a solid foundation for commercial success as well as the potential to truly differentiate its offering in the region and better serve the community.

↳ 2. CONCEPT



↗ SEE P.30 FOR THE FULL YARANGA CASE STUDY

This is the phase of a project where we dream big and shoot for the moon, as we move from a loose idea to a detailed one. Yet the creativity that is brought to this phase of a project is always grounded in clear objectives and operational intentions, and seemingly simple practical details that must be considered. No matter how inspiring an idea may be, it must work in practice. Sometimes, a casual conversation or seemingly small detail can have unexpectedly large impacts further down the track on a project, and thus we always consider a project end-to-end, and give ourselves the freedom of a tight brief.

“This isn't just about drawing a pretty picture. It's about thinking how the entire project can come to life and turn a profit, because we're going to stand at the opening and put our hand on our heart and say this will work.”

↳ Nicholas Traviss

Case study → Yaranga Gardens Kogalym, Russia

Yaranga Gardens started off with a single phone call. One hand-drawn sketch and an email later, the project was in full swing. Taking full advantage of strong trust and a collaborative relationship with our client, we were able to move things very quickly, sharing ideas informally with agile response and open dialogue.

Yet the strictest rigour was still applied before moving concepts forward. While operational manuals may seem at first like something that belongs further into the process, we see it as a crucial step in the early concept phase. Understanding operational intentions deeply informs concept and design. Considerations as granular as staffing numbers, intended capacity and activities to be included are all interdependent, affecting everything from concept feasibility to architectural design and everything in between. When designing an environment that holds a myriad of living creatures, it becomes all the more important, requiring conversations with aquarists, biologists, curators and other experts as early in the project as possible to ensure the wellbeing of all life within is front and centre.

Proper preparation is vital to ensure the speed at which a project can become fully operational (and thus profitable). It is also vital to avoid failure in the duty of care for wildlife, which is an ethical responsibility in developing any natural habitat display.

↳ 3. DESIGN & ENGINEERING



Not simply architectural, for entertainment destinations, design and engineering have many facets to consider. From visitor journey creation and storytelling, to materials and structural elements, to environmental requirements to support living habitats, all of this is developed within the parameters of the overall concept and intention. A project thrives when the partners we engage bring the same level of enthusiasm for innovation to the table that we do.

“Our intention is always that design is thoughtful of place and context, and tells a story. The aim is to be inspirational but always with purpose.”

↳ Nicholas Traviss

“A team way of working, when specialists share knowledge with each other, is a pleasure.”

↳ Sergey Grishchenko

Chief Agronomist, LP Group (Galactika and Yaranga Gardens partner consultancy)

“LP Group and Aquamarine complement each other well to achieve good results. Both our teams enjoy the pleasure of working and this is very important because it shows in the work we do.”

↳ Vladimir Glizer

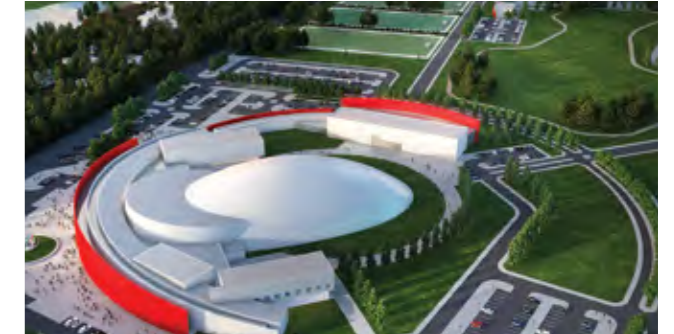
Project Manager, LP Group (Galactika and Yaranga Gardens partner consultancy)



Case study → Turkuazoo (Istanbul Aquarium) & Greater Cleveland Aquarium

Our projects have included, among others, challenging design and engineering feats such as the longest underwater tunnel in Europe, with a 270-degree view of an impressive shark tank, at Turkuazoo (now Sea Life Istanbul Aquarium), and the redesign of a historic building into the Greater Cleveland Aquarium – which was awarded Best Adaptive Use by the Cleveland Restoration Society.

↳ 4. CONSTRUCTION



➤ SEE P.06 FOR THE FULL GALACTIKA CASE STUDY

Construction takes on a whole different dimension when designing for living environments. Managing contractors and working with our own, and our clients', varied partners is part and parcel of large-scale projects like ours. The key to success, in our eyes, is a shared vision of the end goal, and a commitment from every corner to seeing it through.

“It’s got to be done right, all the way through to opening the doors, and beyond. Find partners you trust, and who are in it for more than the money.”

↳ Nicholas Traviss

Case study → Galactika Kogalym, Russia

Our largest project to date, the Galactika Family Entertainment Centre in Kogalym, Russian Federation, offered up many challenges during construction. Not least, creating tropical habitats in a sub-arctic climate and ensuring safe and smooth delivery of living creatures into a relatively remote region of the world far from their typical environs. Among the eventful experiences of the project, was our first site visit made at a frosty -47° – a telling sign of the conditions in which construction would take place. We worked closely with our main contractors, and had supervisors on the ground on-location, enabling us to advise on and resolve issues promptly.

Long-term commitment is part of our approach – and a complimentary audit at Galactika three years after completion ensured we could not only uncover and correct any defects, but that we learn from each process and ensure confidence in results.

↳ 5. OPERATIONS



Where all the hard work of good feasibility planning comes to fruition. Successful operational management of an entertainment centre is a complex equation of elements, from back of house functions, systems and processes, ticketing and productisation, to staffing considerations and the visitor experience, to visual design, flow and utilisation of a space. With living habitats added to the mix, animal wellbeing and mortality rates are crucial considerations. With so much to think about, this is why end-to-end planning is crucial from the very first stage of any concept. Fortunately, operational success is not a 'lock and leave' function – and we see it as something that can be continually reviewed, improved and optimised – particularly as situations and contexts shift and change in the surrounding environment and community.

“Every project is an opportunity to create trust, through the actions we take and the decisions we make.”

↳ Nicholas Traviss

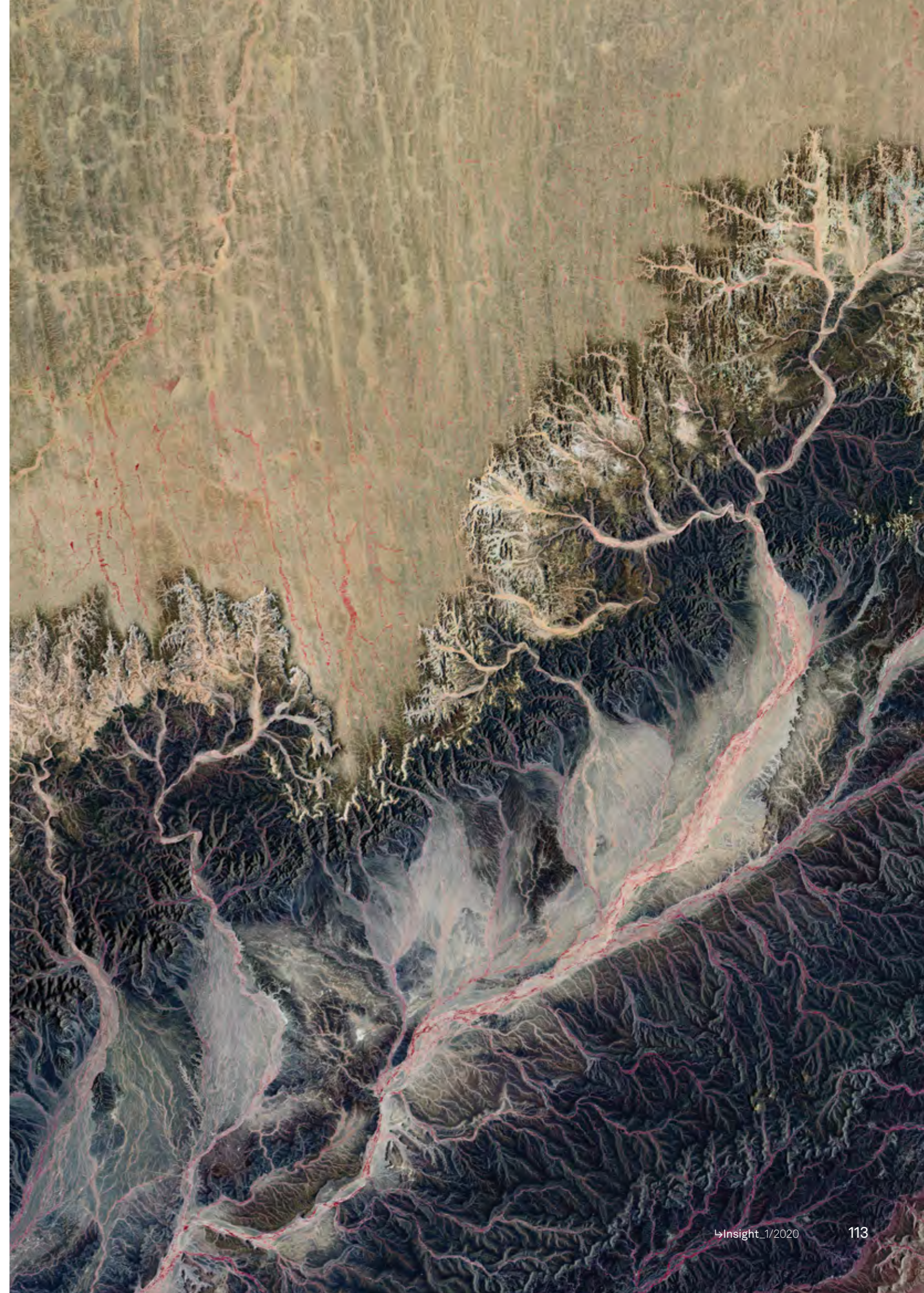
Case study → Dubai Aquarium and Underwater Zoo, Dubai, United Arab Emirates

In 2013 after a shared tender process during which we were invited to take over management, we began a management contract. We were tasked to increase visitation to the aquarium, with a target set to achieve over 650,000 visitors per year. The aquarium was situated in Dubai Shopping Mall – and despite an impressive viewing tank visible to most of the mall's 65 million annual shoppers, it was failing to convert these into visitors to the main aquarium, which was upstairs and out of sight. People simply didn't know it was there, and no functions were in place to entice them deeper into the experience.

We improved and added several exhibits, but focused mainly on reviewing the overall structure. By shifting the queuing and ticketing function to sit by the large main tank, we created a visible and accessible entrance, inviting people into the main upstairs attraction. The customer journey that we reimagined created a pathway that built continuity through the experience – leading people in a route around the main viewing window, through the tunnel, then upstairs through the main exhibits to exit finally through a gift shop.

Crucially we also played a role in helping to improve the wellbeing of fish in the aquarium, bringing the necessary knowledge and practice to improve the tank habitats, and decrease fish mortality in the process.

Visitation increased to 1.2 million, with the aquarium now a Top 10 for visitation worldwide, and awarded People's Choice on Trip Advisor. The project was the start of a collaborative consulting partnership with EMAAR and led us being appointed to design the EMAAR Aquarium and Underwater Zoo in Istanbul – a project that was completed almost exactly according to our design and specification.



↳ inviting.

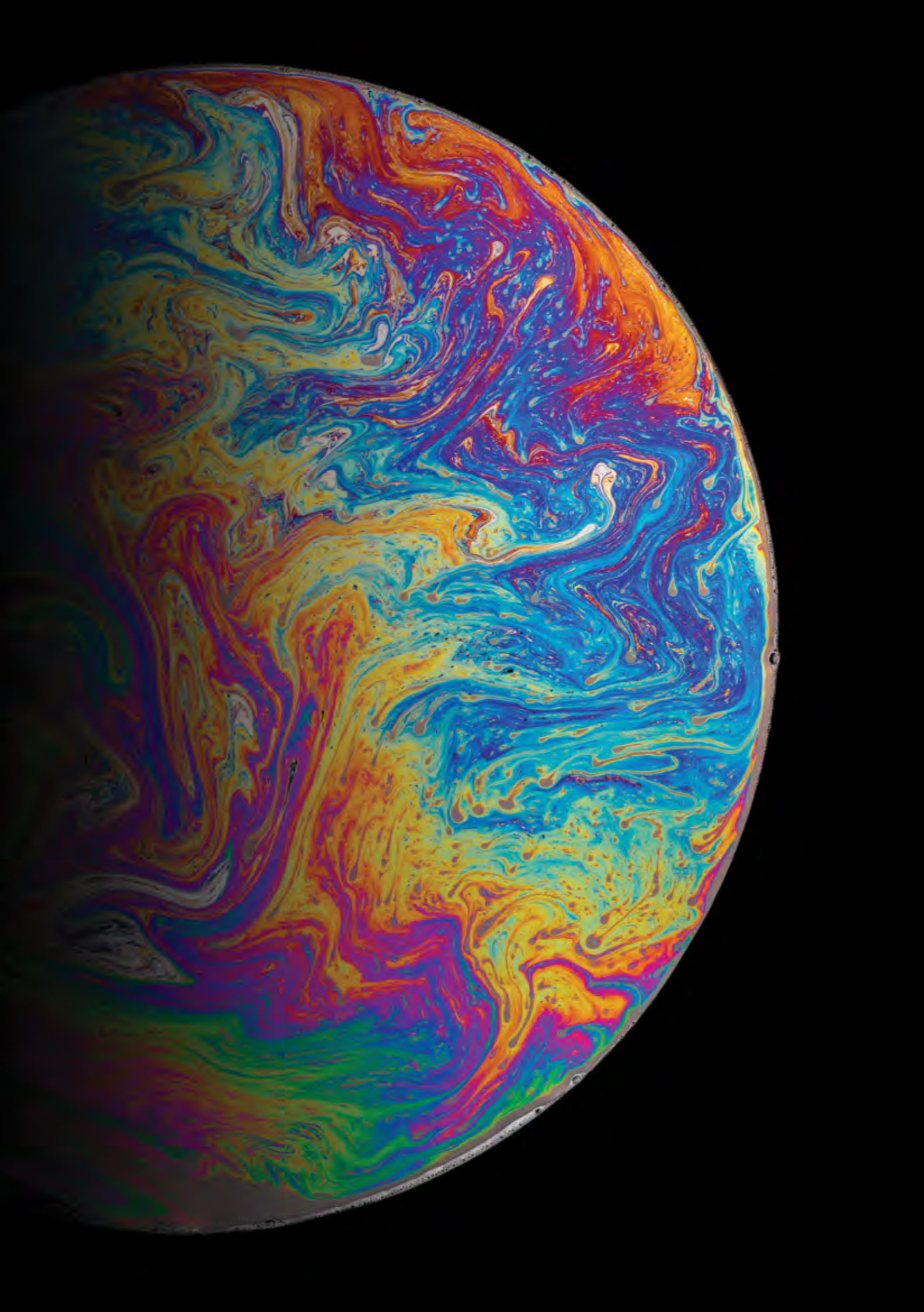
Conversations
& partnerships.

We're inspired by challenges. We've built our business on being adaptable, working in the world's most unique, complex and demanding contexts. We pride ourselves on being able to craft solutions which inherently fit their context.

From feasibility studies recently completed in Columbia, Nigeria, Bali and Jakarta, to projects in North Korea and Russia, our diverse project base speaks for itself.

Whether you are interested in exploring new concepts or investing in our projects — we are ready to shape your vision for the future.

↳ projects@aqm.nz



EARTH — OUR PLANET. OUR HOME.

Our planet is filled with rich natural wonders, diverse cultures, iconic species and wildlife spectacles, that in our modern times have never been more accessible. But with accessibility comes complacency. In times of great uncertainty, it pays to step back, reflect and take stock of what our planet has to offer, our impact on it, and what we can do to improve its outlook for humankind and all the species that inhabit it.

Our Incredible World.

Planet Earth, its sheer existence and its ability to sustain life itself can only be described as a miracle. The combination of an unfathomable number of factors and events over 4.5 billion years has allowed life to evolve and thrive, ultimately leading to the modern environment and climate we live in today. Everywhere we look, we see new marvels to learn about, and to share.

A 10 km² patch of rainforest can contain as many as 1,500 flowering plants, 750 species of trees, 400 species of birds and 150 species of butterflies.²²

↳ Globally, nature provides services worth around US\$125 trillion a year.²³

↳ A quarter of all the life on Earth can be found beneath our feet — in the soil.²⁴

↳ There are over 3,000 fruits found in rainforests. People in the Western world make use of about 200 of them, but the indigenous tribes of the rainforest make use of over 2,000.²⁵

In awe of animals

↳ African buffalo herds are known to select the direction they'll travel by voting.²⁶

↳ Cows kill more people than sharks. Sharks kill an average of four people per year, while cows kill an average of 22 annually. Though some are due to road accidents, 75 percent were premeditated attacks.²⁶

↳ Armadillos are bulletproof.²⁷

↳ The river Thames is home to harbour seals, grey seals, harbour porpoises, seahorses and two kinds of sharks.²⁷

The Earth's Cry For Help.

Despite our infinitesimally small window of existence, today, humans have become the greatest threat to the health of our planet. As the human race continues to exploit finite natural resources, the Earth, its environment, and our fellow inhabitants are becoming increasingly threatened as climate change and its impacts loom overhead as a result.

↳ Due to rainforest destruction, the Earth loses an estimated 137 plant, animal and insect species every day, including many that could potentially have medicinal potential.²⁸

↳ In the 20th century, freshwater fish had the highest extinction rate worldwide among vertebrates.²⁹

↳ In May 2019, sensors at the Mauna Loa observatory in Hawaii — which has tracked Earth's atmospheric concentration of CO² since the late 1950s — detected a CO² concentration of 415.26 ppm. The last time Earth's atmosphere contained this much CO² was more than three million years ago when sea levels were several metres higher, and trees grew at the South Pole.³⁰

↳ In the past 40 years, about one-third, or approximately 2.4 million square kilometres of Arctic sea ice has disappeared — this is roughly the size of Algeria.³²

↳ One and one-half acres of rainforest land is lost every second.

↳ The world's tropical forests are shrinking at a staggering rate. In January 2020 alone, the Amazon lost an area 2 times the size of Paris.³³

↳ Today, 90 percent of the world's seabirds are estimated to have fragments of plastic in their stomach.³⁴

↳ Tropical deforestation is now responsible for 11 percent of the world's CO² emissions. If it were considered a country, tropical deforestation would be the third-largest emitter after China and the United States.³⁰

↳ Since the beginning of the Industrial Revolution in 1750, the acidity of surface ocean waters has increased by about 30 percent.³⁵ This increase is the result of humans emitting more carbon dioxide into the atmosphere and hence more being absorbed into the oceans. The amount of carbon dioxide absorbed by the upper layer of the oceans is increasing by about 2 billion tonnes per year.³⁶

↳ Sea levels are rising at the fastest rate in 3,000 years, an average 3mm per year. The two major causes of sea-level rise are thermal expansion — the ocean is warming, and warmer water expands — and melting of glaciers and ice sheets that increases the flow of water.³⁰

The world is losing 18.7 Million Acres of forest every year, equivalent to 27 soccer fields every minute.³¹

Time to act

We are the first generation that has a clear picture of the value of nature and the enormous impact we have on it. We may also be the last that can act to reverse this trend. With the threat of extreme heat, drought, floods, poverty, biodiversity loss, habitat degradation and global instability, there is no time to lose. Our actions *can* change things, and *need* to. The time to act is now.

Due to rising global sea levels, at least eight islands in the Pacific have been swallowed by the sea in the last century, with Tuvalu, Kiribati and the Marshall Islands feared to be the next low-lying nations to be wiped off the map.³⁷

↳ Nearly 200 million people depend on coral reefs for protection against storm surge and waves.³⁸

↳ Although cities occupy only 3 percent of the Earth's surface, they consume 78 percent of energy and emit 60 percent of carbon dioxide.³⁹

- ↳ More than half the world's population now lives in cities, and by 2050 almost 70 percent of the world will be urbanised.³⁹
- ↳ Some parts of Jakarta are sinking as much as 25 centimetres per year. Jakarta's precarious position is thanks to a combination of two factors – rising global sea levels and land subsidence as underground water supplies have been drained away to meet water needs.³⁰
- ↳ Forests mitigate climate change by absorbing CO₂, and they are a haven for biodiversity.⁴⁰
- ↳ 80% of all land-based animals live in forests. The Amazon alone is home to 10% of all the wildlife species we currently know about.⁴¹

We can all do our part

We are all kaitiaki (guardians) entrusted to protect our world's natural treasures.

The Intergovernmental Panel on Climate Change (IPCC) reports that irreversible and catastrophic climatic shocks can still be avoided if we don't surpass a 1.5°C increase in global temperature.⁴² To achieve this, an unprecedented and coordinated response is needed to hit zero emissions by 2050.⁴²

Protecting the earth requires system-wide change and will challenge us to establish a new sustainable 'norm'. We believe it happens from government and institutions down, from the grassroots community up, and from businesses outwards. Our inherent ways of current thinking must change at every level as we call upon everyone to do their part.

What we know, we protect

Education is a vital tool in creating the awareness and engagement necessary to drive change. When we better understand our planet and the challenges it faces, we not only come to appreciate why nature is so important, we are much more likely to take action to protect our environment.

Through education, we can create a future where people and nature thrive.

This philosophy has become increasingly important in the work we do. At Aquamarine, our expertise is in celebrating and sharing the natural world with people in an accessible way. So nature's destruction and the need for protection is front-and-centre for us. We all have our role to play, and Aquamarine's is in helping to grow awareness and appreciation for natural habitats, to support the push for change.

What's good for the planet is good for business

Increasingly, businesses around the world are responding to the imperative consumer demand to go 'green' — and those who don't will soon become remnants of a bygone era. In the face of much-needed change, significant economic opportunities exist for businesses willing to adapt.

↳ One acre of rainforest timber yields an owner US \$60. One acre for grazing yields an owner US \$400. One acre of renewable medicinal plants and fruits yields an estimated US \$2,400 (looking beyond the immediately obvious, and often destructive, uses of land can yield great opportunity and greater returns).²⁸

↳ The cost of inaction: many of the world's largest companies report a total of close to US\$1 trillion in projected losses due to the impacts of climate change, which will only heighten over time.⁴³

↳ Sustainable Initiatives by businesses are in high demand worldwide by consumers and also offer a significant opportunity for business. According to the World Economic Forum, work towards achieving the Sustainable Development Goals could represent a \$12 Trillion opportunity for business.¹⁸ By other calculations, the Global Commission on the Economy and Climate says "Bold climate action could deliver at least \$26 trillion in net cumulative benefits from now until 2030 compared with business as usual."¹⁹

Through climate-related opportunities, businesses could gain US\$2.1 trillion, outweighing the cost of implementation by 7x.⁴³

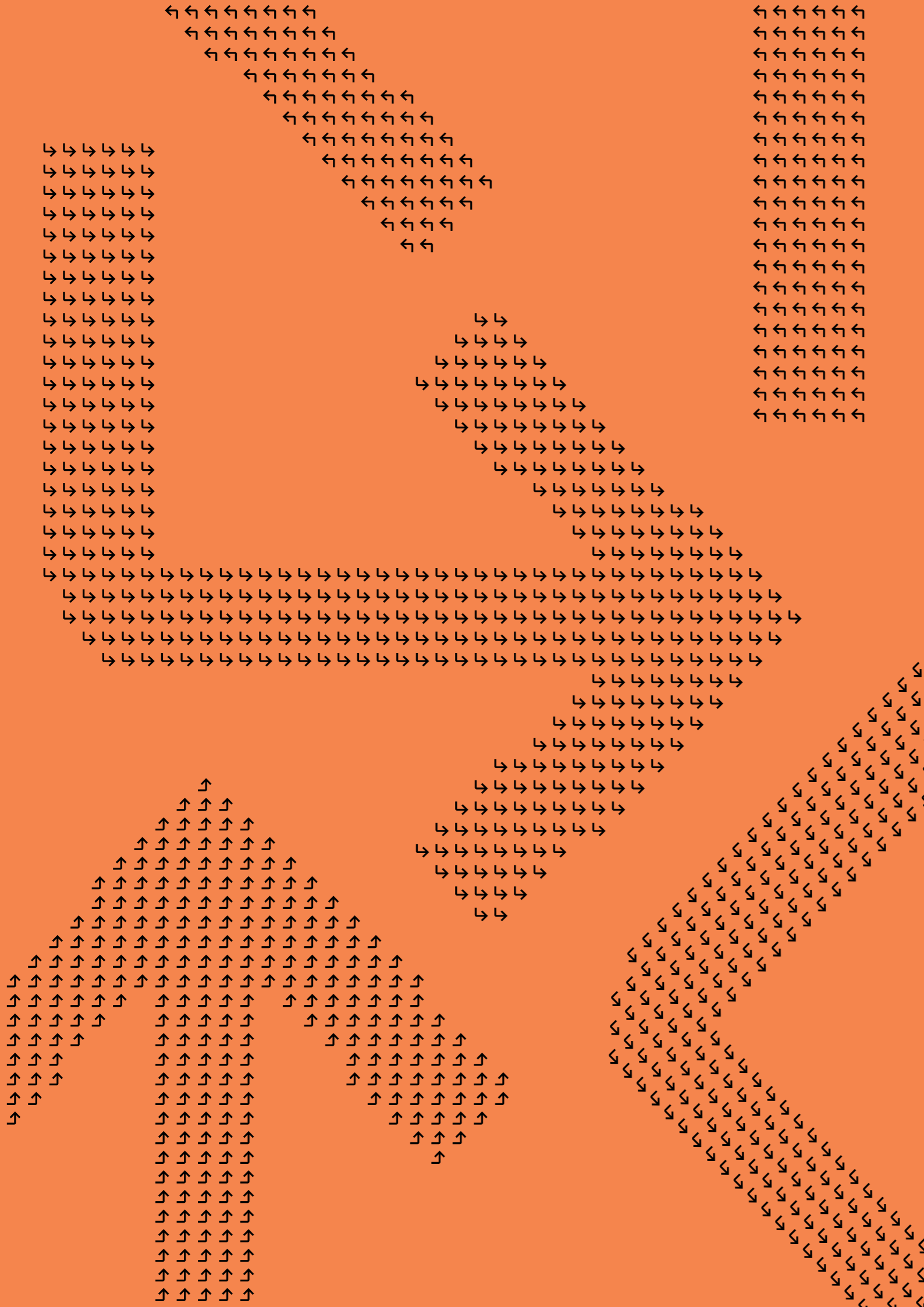
The vanguards of change

Governments, businesses, communities and individuals all over the world are already innovating green technologies, products, services and policies. Collaboration, connection and change — with and for the environment and people. When we work together and learn from each other, we can collectively lead the way towards a brighter future.

The Whanganui River in New Zealand has been declared a legal person⁴⁴ a game changing global milestone in our respect for nature and cultural priorities.

↳ The United Nations Sustainable Development Goals highlight a global call to promote prosperity while protecting the planet. With 17 interconnected goals in place, the UN is coordinating the effort to achieve them by 2030.⁴⁵

↳ Fridays For Future global school strikes for climate had humble beginnings. Starting with a solo protest by Greta Thunberg in 2018, the demand for urgent action on the climate crisis has rapidly spread among those most exposed to the fallout, with regular youth-led protests now happening all over the world.⁴⁶



↳ End notes

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