

THE MUSEUM OF HUMANKIND

NGAREN





Ngaren: The Museum of Humankind

Strategic Roadmap and Content Design Overview

February 2021

“I believe that if we can make the science of the origins of humanity accessible and exciting to everyone, and show people the amazing journey of humanity, we can shift paradigms and change the world”.

Richard E. Leakey



I am pleased to present the Strategic Roadmap and Concept Design Overview for Ngaren: The Museum of Humankind which will be built in the Rift Valley of Kenya to celebrate the human journey. I believe that the journey of how humans came to be is the most adventurous and exciting story we could ever tell – a story that we can finally show in the details it deserves. The story is largely an African story, one of chance, with many experiments and failures, where nothing is static. The story shows us that we are interconnected with all life. It shows how extinct animals like the dinosaurs are not simply monsters of a bygone epoch, but illustrates to us that without their demise we would not exist. And it is a story that shows that we are all one people. A story that provides us with clues to our own behavior as a species. A story that can certainly influence our future.

The idea of Ngaren grew out of my desire to bring this story to life - to translate the science of human origin into captivating content, and create experiences that will bring people face-to-face with the forces of change that brought about our existence. The wealth of fossils that has been discovered over the past fifty years provides us with an extraordinary evidence of humanity’s origin and evolution, as well as insight into the geographical and environmental context underlying our serendipitous journey. By showing us how life, landscapes, and climate have changed over time, and how living things responded to those changes, scientific evidence provides invaluable lessons for us as we navigate our future.

But the reality is that this science – the science of human origins and life on this planet - is often inaccessible to people. We are emotional animals. We make sense of the world through stories that engage

our curiosity, emotions and imagination – things that touch our heart and soul. A good story can change the world, which is why stories have been used to hand down learning and knowledge for thousands of years. Therefore, the purpose at Ngaren is to tell the story of humankind in a way that has never been attempted before – a story where human evolution was not inevitable, where Africa plays a pivotal role; a story in which we are all migrants, in which our differences are insignificant and irrelevant.

I believe that if we can make the science of the origins of humanity accessible and exciting to everyone, and show people the amazing journey of humanity, we can shift paradigms and change the world.

To tell this amazing story, Ngaren has partnered with some of the world’s leading scientists, exhibit and content designers, special effects creators, technology experts, and storytellers. We have brought together a world-class Board of Directors representing academia, science, genetics, film-making, storytelling, fundraising, sustainability, business, museum administration and design, technology and non-profit governance. Together we will invite people to join a journey into the origins of the universe, and the story of our own planet, where the relentless forces of climate change are the backdrop to the evolution and extinction of species, large and small.

To stage this amazing story, we need a physical place. We will build Ngaren as a landmark, in the most symbolic site for our human origins: Africa’s Great Rift Valley. I envision Ngaren as a repository for our collective identity as members of one same species –

humankind. It is time to celebrate our roots – as brothers and sisters from a common home. Ngaren will be a ‘site of memory’, a vehicle for validating and authenticating our shared past, and imagining a truly global society that together builds a just future.

In addition to a physical museum, Ngaren will also be a live-science and on-line hub of relevant and meaningful content which will provide access to the science of human origins worldwide, including school programs which will be able to broadcast this amazing story as wide as possible.

Ngaren will be more than a museum. It will be a complete immersion into our evolution—tracing the history of life on earth from its very beginning to the present. Walking through history, meeting your first ancestors, and dramatically realizing your brief role in our planet’s rich history will be awe inspiring - and even life changing - for all visitors.

This is our goal, and I believe there has never been a more critical time for our mission.

Best,

Richard E. Leakey

A handwritten signature in black ink, appearing to read 'Richard E. Leakey', with a long, sweeping horizontal line extending to the right.



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GOALS






A good **story**
can **change** the world.

Mission

Ngaren celebrates the beginnings of all humanity. Dedicated to educating humankind on our shared past, Ngaren tells the story of our common ancestry, our epic journeys and our future obligation to protect the planet that is our only home.

Core values

- **Scientific literacy:** science and research are indispensable to our understanding of the world.
- **Storytelling:** storytelling is a powerful means in which modern learning takes place.
- **Evolution:** the law of evolution best explains how life came to be and provides the means for reconstructing the development and diversity of all forms of life including humans. If embraced as a critical thinking method, it helps dissolve ignorance and act for a better future for our planet and us.
- **Innovation in Africa:** Africa has the power to implement and host innovative projects. Ngaren will be a world-class museum, with digital technology and storytelling defining a revolutionary model of new museum design.
- **Passion for scientific discovery:** the Leakey family is a symbol of passion for fieldwork and discovery. They have inspired generations of scientists in the field of paleontology, prehistory and anthropology in Africa, and their spirit and legacy inspires youth to embark on scientific thinking and careers.
- **Monument to the African legacy of all living humans:** Ngaren will be a 'site of memory' for our collective identity as members of the species of humankind.



Located in the **Rift Valley**, Kenya, Ngaren will be where the world will come face-to-face with the **forces of change** that brought about our existence – and imagine the changes needed to sustain it.

Vision

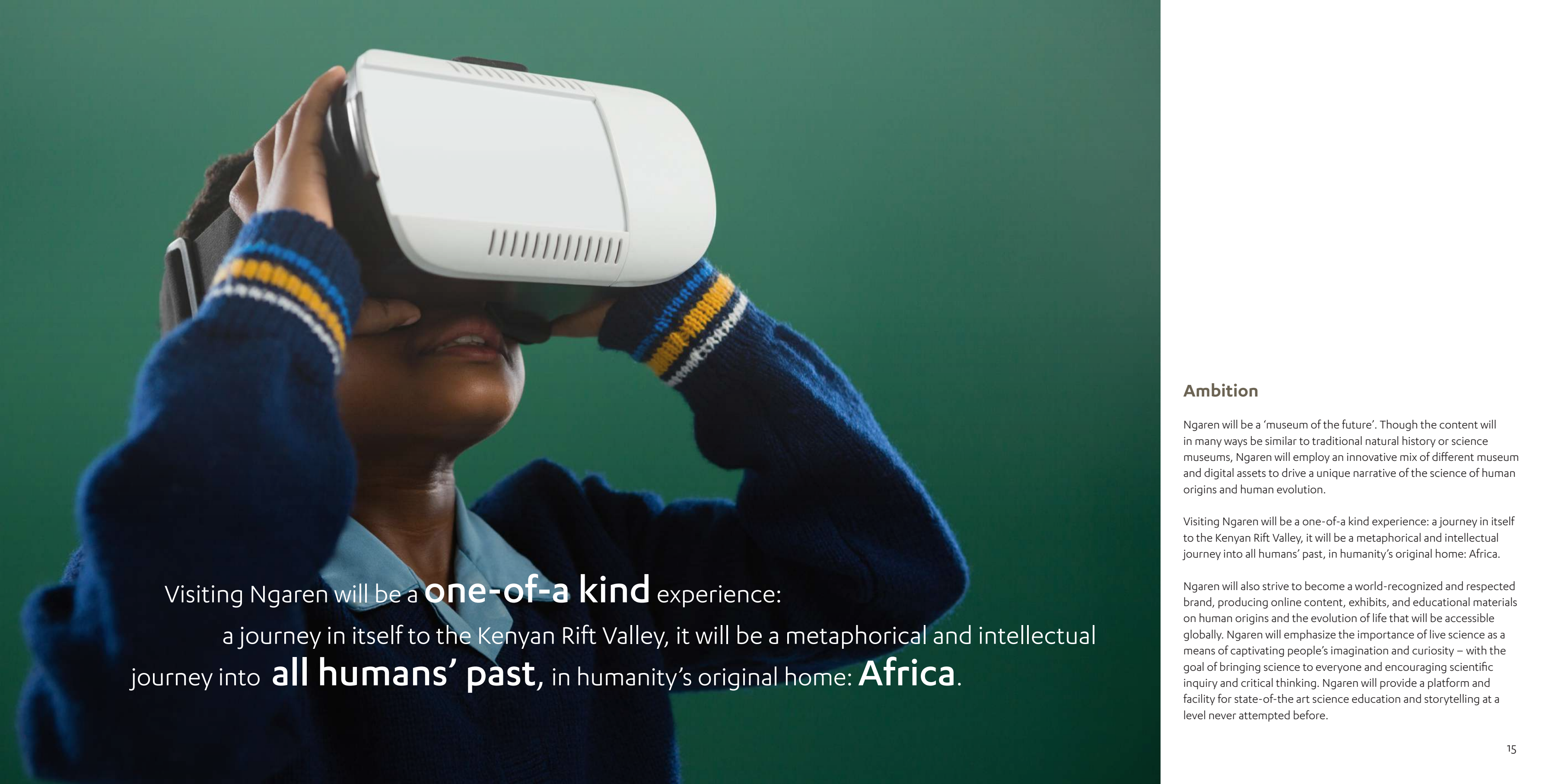
With the capacity to host over 1,000,000 visitors a year Ngaren will be the only museum in the world driven by the narrative of our amazing human journey, designed to inform, inspire, and empower visitors to realize that we are all one human family and part of an interconnected and fragile web of life. Located in the Rift Valley, Kenya, Ngaren will be where the world will come face-to-face with the forces of change that brought about our existence – and imagine the changes needed to sustain it.

Position

Ngaren will be an internationally recognized authority in the field of human origin and evolution, a leader in science storytelling, education and digital content that will transform our understanding of museums.

Core promise

Ngaren will promote critical thinking and scientific inquiry, encouraging visitors to identify problems and ask questions, evaluate information and data, and draw conclusions from evidence. Only with the knowledge and empathy Ngaren gives people, will they be better informed, inspired and empowered to support the future of the human family and of our planet.

A person with dark skin and curly hair is wearing a white VR headset. They are holding the sides of the headset with both hands, which are wearing a dark blue sweater with yellow and white striped cuffs. The background is a solid dark green color.

Visiting Ngaren will be a **one-of-a kind** experience:
a journey in itself to the Kenyan Rift Valley, it will be a metaphorical and intellectual
journey into **all humans' past**, in humanity's original home: **Africa**.

Ambition

Ngaren will be a 'museum of the future'. Though the content will in many ways be similar to traditional natural history or science museums, Ngaren will employ an innovative mix of different museum and digital assets to drive a unique narrative of the science of human origins and human evolution.

Visiting Ngaren will be a one-of-a kind experience: a journey in itself to the Kenyan Rift Valley, it will be a metaphorical and intellectual journey into all humans' past, in humanity's original home: Africa.

Ngaren will also strive to become a world-recognized and respected brand, producing online content, exhibits, and educational materials on human origins and the evolution of life that will be accessible globally. Ngaren will emphasize the importance of live science as a means of captivating people's imagination and curiosity – with the goal of bringing science to everyone and encouraging scientific inquiry and critical thinking. Ngaren will provide a platform and facility for state-of-the art science education and storytelling at a level never attempted before.



The one and only **immersive experience** with our
hominin ancestors walking alongside **Turkana Boy** and others.

Artist's impression of the encounter with Turkana Boy at Ngaren by Davide Bonadonna

Ngaren Highlights

- The only museum driven by the narrative of human origins and evolution, in the place where the human journey begins.
- The only all-digital Planetarium in Africa.
- A one and only immersive experience with our hominin ancestors, walking alongside Turkana Boy and others.
- The only African museum to have a permanent display of real-size African dinosaurs.
- The only immersive digital Paleo-aquarium in Africa.
- Innovation lab to create, teach, and promote science, sustainability, imagination and equality.
- A world-class center created with innovative business and environmental sustainability values.
- A world-class center for training specialized staff for science storytelling and exhibition design.
- A think-tank for scientific literacy and discussion on human origins, evolution and diversity.



Artist's impression of the *Spinosaurus* hall at Ngaren by Davide Bonadonna.



WHO WE ARE

A photograph of an elderly man with white hair, wearing a red and white checkered shirt and khaki shorts, standing on a rocky, grassy ridge. He is holding a walking stick and looking out over a vast, hazy savanna landscape. The terrain is rocky and covered with dry grass and small shrubs. In the background, a wide expanse of green and brown savanna stretches towards distant, hazy hills under a clear sky.

Imagine your **future** through your past.
And **redefine** your place in the world.

Founding Father

Richard Leakey is a world-renowned Kenyan paleoanthropologist. As the son of the famous paleoanthropologists Louis and Mary Leakey, it was only natural that Richard also entered anthropology. He worked on several excavations, made numerous discoveries in the field of human evolution and published extensively on his work. Leakey heads the Turkana Basin Institute, where students and experts come together to do fieldwork, study fossils and explore and exchange knowledge. During his career, he was director of the National Museum of Kenya in Nairobi and later made a name for himself as a powerful fighter against wildlife crime in his role as director of all wildlife parks in Kenya. In his rich and sometimes turbulent life, Leakey developed an urge to share his knowledge and passion about the evolution of humans with a large audience. More and more he felt that this story had to be told in an integral way, in which humans are not superior to nature, or are working against it or are threatened by nature, but are part of it. This gave rise to the idea of founding Ngaren, the museum of humankind.



Background

Ngaren, Inc. was incorporated in 2018 as a 501 c3 in the USA. A first round of seed funding in 2018 enabled Ngaren to establish a board of directors and offices in the USA and Kenya and create a strategic and fundraising plan for the development of the concept. In 2019, a 200-acre plot of land was secured as a donation by the Leakey family for the future home for Ngaren and like-minded institutions who will co-locate on the campus. In 2019, at the invitation of Richard Leakey and the Dutch embassy in Kenya, Naturalis, presented by Edwin van Huis (general director) and Caroline Breunese (head of exhibitions), started to work on a Master Plan for Ngaren. Naturalis is an international expertise center for biodiversity, is in the top 5 of world class natural history museums, has expertise and collections in paleoanthropology, and had just recently built a completely new museum. In October 2020, Ngaren established a partnership with Weta Digital, a world-class special effects company, to help bring to life the narrative of Ngaren and create special effects, promotional materials and exhibits. Kenyan architect, Otto Mruttu, joined the Ngaren team as the project manager for building and construction in 2018. Ngaren draws upon decades of combined international experience and expertise in science, storytelling, and animation and digital effects of the partners involved: Ngaren, the Naturalis Biodiversity Center of The Netherlands, and Weta Digital New Zealand.

The Ngaren Partnership

Ngaren is a new cultural and educational institution, that combines expertise of different partners in the EU, USA, Kenya, and New Zealand, and aims to broaden its partnership further with additional museums to be built on the Ngaren campus. The new Eastern African Arts Museum of Nairobi (EAMAN) has already saved a spot in the campus along with Ngaren. Together, they will pave the road for a world-class standard of museum and creative industries in the whole of Africa. Because Ngaren will be both a physical place (a museum) as well as a digital brand, content and message, we have partnered with some of the world's leading scientists, exhibit and content designers, special effects creators, technology experts and storytellers to reimagine the possibilities for museums and learning. And we have brought together a world-class Board of Directors representing academia, science, genetics, film-making, storytelling, fundraising, sustainability, business, museum administration and design, technology and non-profit governance.

Together we will invite people
to join a **journey into the origins** of the universe,
and the story of our own planet, where the relentless forces of **climate change** are the backdrop
to the **evolution** and **extinction of species**,
large and small.

Ngaren Board of Directors

Richard E. Leakey, Founder
Sarah Ferguson, The Duchess of York
Andrea Frey, Founder, AJF Advisory
John Heminway, Documentary Filmmaker
Henry Louis Gates Jr., Alphonse Fletcher University Professor,
Director of the Hutchins Center for African & African American
Research, Harvard University
Marta Mirazón Lahr, Professor of Human Evolutionary Biology,
University of Cambridge
Rachel Mbai, Attorney and Kenyan Advocate, Kaplan and Stratton
Scott Miller, Deputy Under Secretary, Smithsonian Institution
Ellen C. O'Connell, Chief Executive Officer
Tony Saxton, Founder and Managing Partner, Terra Group Holdings
Annette L. Williamson, Board of Trustees, Ngaren USA

Ngaren Team

Ellen C. O'Connell, Chief Executive Officer
Edwin van Huis, General Director Naturalis Biodiversity Center
Caroline Breunese, Director of Exhibitions Naturalis Biodiversity Center
Federica Crivellaro, Ngaren Exhibitions and Content Developer,
Palaeoanthropologist Turkana Basin Institute
Marijke Besselink, Content Developer Naturalis Biodiversity Center
José Joordens, Professor of Human Evolutionary Biology, The
University of Maastricht
Anne Schulp, Researcher at Naturalis and Professor of Vertebrate
Paleontology Utrecht University
Karin Boomsma, Kenyan Development and Liaison Officer
Otto Mruttu, Project Management for Building and Construction

The Naturalis Biodiversity Center of The Netherlands

The Naturalis Biodiversity Center of The Netherlands is a research institute for biodiversity with over 120 scientists, working on issues in the field of biodiversity on land and at sea worldwide: mapping species and their cohesion, the changing living environment and the influence of climate change. One of the largest natural history collections in the world, with over 42 million objects, Naturalis operates a national museum, consisting of 10 permanent exhibits. The museum reopened in 2019 after it was rebuilt and furnished from scratch – a brand new museum vibrating of amazing stories that are helping bringing to life Naturalis's unique collections and attracting new audiences to science.

Weta Digital New Zealand

Weta Digital is the standard-bearer for creativity and innovation in visual effects and animation, attracting talent, partners, and clients that seek to push what is possible in pursuit of their artistic vision. Over the years, Weta Digital artists have received numerous awards and recognitions, including: 6 Academy Awards® for Best Visual Effects, 10 Academy Science & Technology Awards, 6 BAFTA Awards for Best Special Visual Effects; 7 VES Awards for Outstanding Visual Effects in a Photoreal Feature; 2 Emmy Awards for Outstanding Special Visual Effects. Weta was founded by Peter Jackson, Richard Taylor and Jamie Serlik in 1993 and has worked on animation, special effects and digital creation for hundreds of films including: The Lord of the Rings Trilogy, King Kong, The Fantastic Four, The Chronicle of Narnia, Gulliver's Travels, The Avengers, Rise of the Planet of the Apes, The Hobbit, Iran Man 3, The Hunger Games, Dawn of the Planet Apes, Godzilla, Gemini Man, Terminator: Dark Fate, Ad Astra, Jumaní Next Level, Maze Runner, Deadpool 2, Game of Thrones Season 8, The Umbrella Factory, Avengers: End Game, and the Avatar series.

The background is a detailed architectural drawing, likely a site plan or floor plan, rendered in a light, faded style. It features a complex network of lines representing walls, corridors, and structural elements. There are several circular shapes, possibly representing columns or large openings. Text labels are scattered throughout, including "SLOPE @ 1/4\"/>

STRATEGY



Good **storytelling** can make
science accessible **for everyone.**

Ngaren: a ‘museum of the future’

Ngaren aspires to be a welcoming, accessible and open museum for young and old. By using artifacts, digital technology, live science, immersive exhibits and state-of-the-art science storytelling, Ngaren will challenge visitors to learn, think, do and discuss.

Science is the core business for us at Ngaren. We are tireless ambassadors who believe that good storytelling can make science accessible for everyone. In principle, science should be unambivalent, objective, and accessible. The problem for science, however, is that humans are not entirely rational decision makers. We do not process information in a completely objective way. Scientific evidence, no matter how strong, is often met with ambivalent or even antagonistic reaction. As a result, engaging people in science can be difficult. We are emotional animals. We make sense of the world through stories that engage our curiosity, emotions and imagination – things that touch our heart and soul. But a good story can change the world, which is why stories have been used to hand down learning and knowledge for thousands of years. Ngaren: The Museum of Humankind is being designed precisely to address this phenomenon.

To stage this amazing story, Ngaren will be built at the site of human origins: Africa’s Great Rift Valley. The intention is that the physical site of Ngaren, and the museum building, will be a celebratory place, a monument, and hub, which will act as “a lighthouse for humanity”.

The presence of a physical building will ensure that Ngaren will be something permanent in a volatile, fluid world in which knowledge is often invented, contested, and uncertain.

The vision is that Ngaren will become a repository for our collective identity as members of the species of humankind. It will be a ‘site of memory’, a vehicle for validating and authenticating our shared past and imagining a better future. As such, the location and physical space of Ngaren in Kenya will be a symbol which will grab people’s attention and interest – a touchstone for our common identity and shared origins. Ngaren will then use innovative storytelling as a way to expand our audience, and make the story of our common heritage and shared humanity available globally – through online and educational content.


Create, teach and promote **sustainability**,
imagination and **equality**.



Target audience

Ngaren will focus on the fast-growing middle-class family demographic from Kenya, school classes from Kenya, business visitors looking for some recreation between conferences and meetings, and tourists visiting Kenya. In addition, the online content will be directed to appeal to a global audience including schools in remote areas, universities and the general public interested in human origins.

Ngaren will position itself as a “must-see” for business visitors and also be a place where business visitors can meet for conferences, meetings and special events. For this, Ngaren will be equipped with facilities such as a large auditorium, meeting rooms and good catering facilities. These facilities will also accommodate school groups for on-site special learning activities.



The details are still being **revealed**
in the layers of sediment, and mysteries of the **fossils**
that **scientists** are uncovering.

This story has never been told in full.

Behavioral change

Ngaren will aim to inform visitors, but we also aim to influence people's behavior. The visit to Ngaren should be a life changing experience that makes people think about their place on earth, in nature and within the "family" of humans. By encouraging scientific inquiry and critical thinking, Ngaren's exhibits and educational offerings will encourage visitors to examine their place in the complex web of life and their impact on the planet.

Visitor experience

Every visitor at Ngaren will be able to experience themselves as the protagonist of the story that is being narrated: the journey of how humans came to be over the course of the history of life. This story is the most adventurous and exciting story we could ever tell, and it is a tale that we are still discovering. The uncovering of fossils and amazing scientific findings of research being conducted by scientists around the world, provides us with new evidence and new drama in the story of who we are, on a daily basis.

This story has never been told in full. And because the details of the story are still being revealed in the layers of sediment, and mysteries of the fossils that scientists are uncovering, it is a complicated yet intriguing challenge. Ngaren, with its focus on innovation and cutting-edge science will continuously develop new content and exhibits to match the ever-evolving narrative of this story.

The start of the visit will be the same for everyone - the Planetarium. This introduction will act to establish a mindset for the visit. It will summarize the narrative of the museum, and provide a glimpse into what to expect throughout the experience. It will also aim to stimulate and make visitors curious, and energize them to explore the museum further.


After the Planetarium introduction, visitors will enter the Orientation Hall, a spacious atrium with wide glass windows overlooking the Great Rift Valley. Looking out over this beautiful natural landscape, visitors will be introduced to the actual location where the story of humankind started. With innovative technical media the visitors will be able to see this landscape as it was millions of years ago and meet with early ancestors. Here they will be able to truly connect with early hominins and establish a connection between the present and the past.

This encounter will be the start of the main part of the museum, with a suggested route to follow, but where people can also choose their own path if they are short on time or would like to explore different exhibits in a different order.

The five main museum galleries will all be organized around themes which will be introduced by "protagonists". These "protagonists" will be fossil or scientific findings that are being picked to trigger visitors' curiosity and pull them into the narrative.

After the galleries, the visit will continue to a gallery of games of different sorts to make visitors play with evolution and cooperation, as a transition into three immersive galleries called Treasure Rooms in which visitors will be able to experience nature with all their senses, cultural diversity of people worldwide, meet inspirational people that are leading scientific research, and developing new ideas for sustainable living.

Visitors will end their visit having the opportunity to discuss their thoughts and ideas with Ngaren staff and special guests that will contribute to make the Ngaren experience even more personal and useful to be continued beyond the physical boundaries of the museum.



Digital technology, special effects, **live science**
and **immersive experience** will all **bring to life** the narrative
in compelling and **scientifically accurate** ways.

Artist's impression of *Australopithecus Afarensis* by John Gurche.

Collection

While Ngaren exhibits will include original fossils and artifacts, when legal, possible and appropriate, Ngaren will not house a collection of real fossils and artifacts of human ancestors. In Kenya, the National Museums Act and Antiquities Monuments Act regulates the removal and trade in fossilized human remains that pre-date 1895. The National Museum of Kenya is authorized to compulsorily acquire remains, and therefore Ngaren will include a collection of scientifically accurate replicas, casts and models. Modern 3D printing, with the addition of the extraordinary work of paleoartists, anatomists, and scientists, allows for hyper-realistic and affordable reproductions. World experts will be commissioned to make models of extinct animals, models of trees and plants, mock-ups of (forgotten) landscapes. Digital technology, special effects, live science and immersive experience will all bring to life the narrative in compelling and scientifically accurate ways.



African Global Modern

Look & Feel

Ngaren will welcome a diverse public from all over the world, from different socio-economic-political and geographic backgrounds and ages, and will therefore employ a 'visual language' that will be understandable and appealing to all visitors.

The look and feel of Ngaren will be based around three key elements: African (our origin and the location of Ngaren), global (we are all interconnected with life and each-other on one same planet), and modern (forward looking and innovative).

The look and feel of Ngaren will aim to represent the connection between the past and the present, with elements drawn from tradition and nature fused with sophisticated, modern, technological and innovative design that personifies the Ngaren identity – one where humanity's universal African legacy may be epitomized by colorful, diverse, geometric forms, not constrained to preconceived western stereotypes.

a 30-minute drive
from Nairobi city center.



Holding Power

Ngaren will be a 30-minute drive from the Nairobi city center when the new roads from Nairobi have been completed.

The overall visit to Ngaren will offer an experience between 2 ½ and 5+ hours. The routing and exhibitions will be designed in a way that Ngaren can be enjoyed quickly, for example by a group of business partners with a limited amount of time to spend before their flight back home, or for a longer experience – i.e., a day out for a family. The restaurants and terraces with their amazing view, the galleries and the Evolutionary Game Room will offer more for people who have a lot of time and interest. Workshops, masterclasses, lectures and other special events and exhibits will bring people back again and again.



With the help of cutting-edge **3D technology**,
Turkana Boy will be brought to life
becoming Ngaren’s **“Mona Lisa”**.

Artist's impression of Turkana Boy by Davide Bonadonna.

Turkana Boy

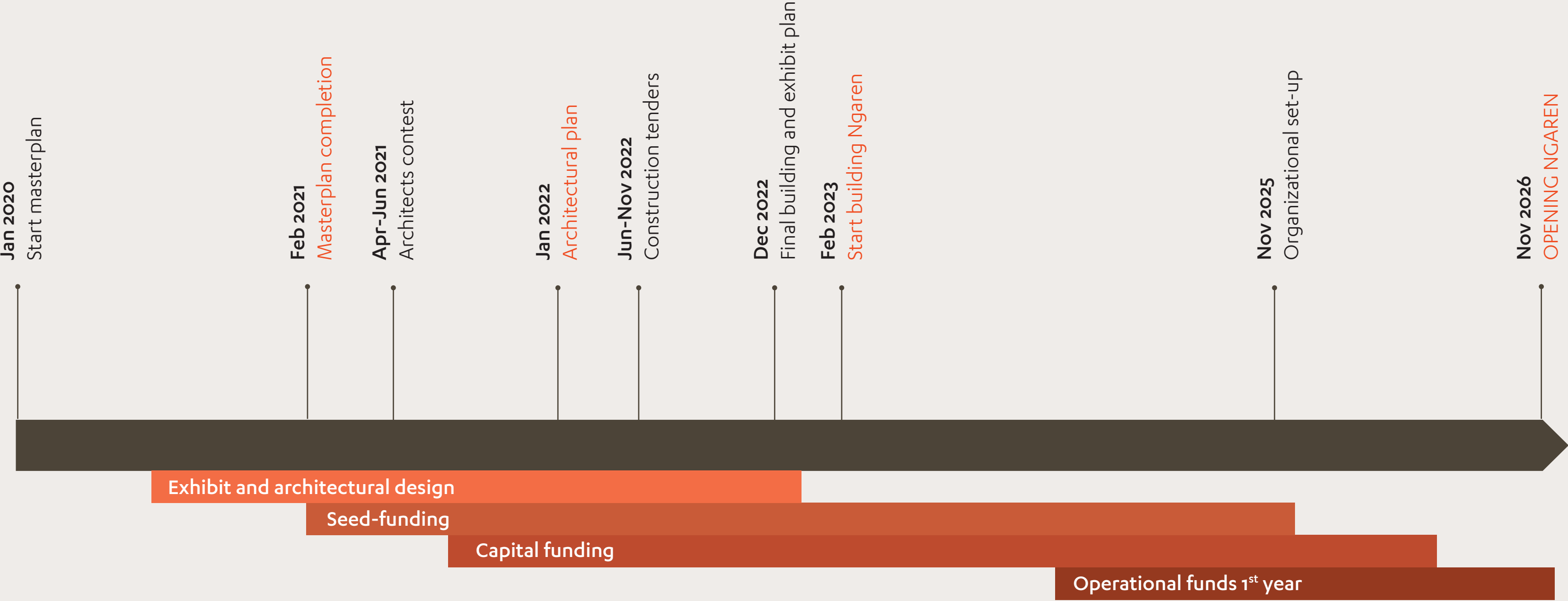
Turkana Boy is an African *Homo erectus* fossil skeleton found by Richard Leakey and his team in 1984. It is dated around 1.6 million years ago and is the most complete hominin individual ever found. The completeness of the skeleton has allowed scientists to make numerous comparative studies to mark important evolutionary stages of development into modern humanity. Also, they have been able to assess that Turkana Boy died when he was between 8 and 10 years old, and that he had a severe scoliosis that certainly required him being looked after by his community/family. These facts and more can be decoded from a fossilized skeleton.

At Ngaren, with the help of cutting-edge 3D technology, Turkana Boy will be brought to life becoming Ngaren’s “Mona Lisa”.

Turkana Boy will be Ngaren’s ambassador, the icon of the museum that is also immediately recognized as part of the brand of Ngaren. Despite its age and the fact that it is a different species from living humans today, Turkana Boy is proof of humanity’s deep roots back in time and in Africa. Turkana Boy will be used in advertisements, promotions and other outreach for Ngaren as a must-see when visiting Kenya – becoming, hopefully, one more reason to visit Kenya along with its amazing parks with unique biodiversity.

Visitors arriving at Ngaren will be eager to meet Turkana Boy, and the interactive exhibit offered at the museum will draw visitors back because of the magic of the experience.

Timeline





ECONOMIC AND SOCIAL IMPACT

HEALTHY ENVIRONMENT THRIVING SOCIETY PROSPEROUS ECONOMY



Goal 10:

Reduced inequalities

One of Ngaren's core values is to show that Africa has a potential to implement and host world class projects. By building Ngaren, Kenya will become a centre for science and museum innovation and thinking.



Goal 17:

Partnering for the goals

Ngaren inc. is a 501 c3 non-profit organization in the USA and a legal non-profit entity in Kenya. As a new world-class cultural and educational institution, Ngaren combines expertise or different partners in the EU, USA and Kenya, and aims to broaden its partnership further with additional museums to be built on the Ngaren campus.



Goal 7, 9 and 11:

Affordable and Clean Energy

Industry, innovation and infrastructure

Sustainable Cities and communities.

Ngaren is being built as a Net Zero building which will utilize sustainable materials and renewable energy. In addition the project will stimulate sustainable economic and infrastructure development in Kenya, and in Kajiado County, creating hundreds of jobs and opportunities for a rural community.



Goal 13, 14 and 15:

Climate Action

Life Below Water

Life on land

Ngaren's primary message is that human beings are part of an interconnected and fragile web of life. Ngaren will stimulate discussion and thought, and give people the tools they need to act sustainably to support the future of the human family and of our planet.



Goal 4:

Quality Education

Through inclusive and equitable access to its onsite and online programs for educators, Ngaren will guarantee access to scientific literacy even beyond the museum walls.



Goal 5:

Gender Equality

Ngaren's core message is about the equality of all humans as members of one same species, with no distinction for gender or sexual preference. It is a message of great empowerment for women and girls worldwide - as well as everyone else.



Goal 8:

Decent work and Economic growth

Ngaren will provide for new sustainable and inclusive work opportunities primarily for Kenyans. It will also provide cutting-edge training for young people, creating a new generation of professionals in science and museum studies.

Towards Agenda 2030

Ngaren will play a pivotal role in bringing tourism back to Kenya in a post-Covid environment and establishing Nairobi and Kenya as a site of world-class scientific literacy, education, and innovation.

In line with the UN Agenda 2030 Sustainable Development Goals (SDG), Ngaren will have particular impact on education quality (Goal 4) promoting inclusive and equitable access to its programs, with emphasis on the development of on-line classes and material for educators which will guarantee access to scientific literacy even in the most remote parts of Kenya. The program will start regionally, looking to make sure that rural schools have access to Ngaren's world-class on-line educational programs designed to enhance the scientific literacy of school curricula in Kenya, but the aim is to rapidly expand access elsewhere around the globe. In addition, Ngaren will support Goals 5, 7, 8, 9, 10, 11, 13, 14 and 15.



Science is **not just an opinion.**

Education

One of Ngaren's primary goals is education. To this end, Ngaren aims to stimulate curiosity and a pro-science attitude for all visitors. The belief in the importance of scientific literacy – that science and research are indispensable to our understanding of the world – is a critical element of the DNA of the institution, but we also understand that storytelling is often the most powerful means of transmitting information. Therefore, Ngaren will use a combination of real artifacts, immersive experiences, and relevant topics, to arouse a sense of wonder, encourage intellectual inquiry, and support the development of scientific research skills for students and visitors to the museum.

One of our goals is to contribute to knowledge about, and use of, scientific research, and to contribute to the notion that science is not 'just an opinion', but a solid, trustworthy, and diligent way of thinking and working.

In addition, Ngaren aims to give visitors the tools to interpret the information they see and hear in the news, social media, and in conversations with others, in a diligent and methodical way – to make them thoughtful and informed citizens of the world.

One of our goals is to contribute to **knowledge** about, and **use of** scientific research, and to contribute to the notion that **science** is not ‘just an opinion’, but a solid, **trustworthy**, and diligent way of thinking and working.

The Big Five

When you go on safari in Africa, chances are that seeing the Big Five is on your wish list. The Big Five - Lion, Leopard, Rhino, Elephant and African Buffalo - are considered the five most impressive animals in the savannah – a “must see”. The Big Five is both a motivator and an organizing principle for people’s voyage. The Big Five is also a metaphor for Ngaren’s educational principles - five starting points that fit Ngaren’s view of how we, as an institution, can arouse interest in human origins and our environment.

The Big Five concepts for Ngaren’s Educational Framework are: Wonder, Real, Relevant, Inquisitive, and Science-Positive.

Wonder

At Ngaren, we use wonderment as the natural starting point of the learning process. Wonderment expresses itself as questions, which lead to curiosity and ‘the desire to understand’.

Ngaren will therefore employ wonder as a way of engaging visitors and inspiring inquisitiveness. The goal is that all visitors to Ngaren will be amazed and “wowed”. Educational activities at Ngaren will all start with a “wow” factor – aimed at all levels of educational background and age. Objects, examples, or phenomena will be chosen to instill genuine amazement – and inspire inquiry that goes beyond more mundane questions such as “how old, is it?” or “don’t you like this?”. By employing appropriate didactic strategies, wonder will then lead to curiosity and enthusiasm.

Real

At Ngaren, our focus will be on real objects, (or life-like replicas when real artifacts are not possible), real facts taken from nature, real research examples, and real scientists. Our objects and

encounters will aim to make abstract educational concepts (such as evolution) easier to understand. Ngaren will be filled with objects (real and life-size models), real scientists, and real examples of research. Ngaren will strive to bring people into contact with natural history, and to extend the learning environment beyond the walls of the museum – making the learning and information at Ngaren relevant to “everyday” life. Visitors will be introduced to organisms, specimens, fossils, and artifacts that have lived and existed on our planet for millions of years. People will be able to view, touch, examine, hear, and smell artifacts – the experience will be immersive and tactile. Scientists will be available and accessible to share their personal stories, their successes, mistakes, enthusiasms, passions, and fascinations. These encounters will allow visitors to connect to the science in the museum on a more personal level. By giving visitors access to scientists who will convey their knowledge and experiences with passion - relay the experience of the dinosaur they excavated, or the spider that they named - visitors will be exposed to new information in a relevant, live and exciting format.

Relevant

At Ngaren we will do our best to show the richness of nature and its relevance to people’s lives. People are more likely to want to know more about a topic if it is relevant to them, but the relevance of nature is no longer self-evident. Human evolution, nature, and planet Earth are central themes of Ngaren. It is a critical goal of Ngaren to make the content and learning of these themes personally relevant for visitors. By providing visitors with a positive, interesting learning experiences, by creating connections to current events, placing the learning at Ngaren in the context of the real world, extending learning beyond the walls of the museum, and creating social learning experiences, the content of Ngaren can be made relevant.

Inquisitive

People learn best by doing their own research, and therefore learning through research forms the backbone of Ngaren’s educational vision. Wherever possible, we will encourage visitors to find out more for themselves and self-explore. Scientists conduct research in order to document, describe, analyze, and better understand the world. Young children also naturally engage in a sort of “research” to investigate and understand the world around them. They ask questions spontaneously, not hindered, or helped, by previous knowledge or pre-conceptions. They are, in many ways, authentic researchers. The didactics of inquiry-based learning that will be used at Ngaren will encourage this child-like inquiry for all visitors. Scientific rigor is the backbone of our educational vision, and we therefore aim to use research to inspire enthusiasm about science. We aim to stimulate an inquisitiveness, openness, cooperation, and creativity.

Science-positive

We believe it is important for visitors to gain insight into how scientific knowledge is acquired. We aim to encourage a science-positive attitude and stimulate our visitors to do as real scientists do: question the world around them, search for answers, and appreciate their true value. Science has made unparalleled contributions to the development of human knowledge and our understanding of the natural world. Science also plays a critical role in the development of independent thinkers and is a driving force behind innovation. At Ngaren, we think it is important that attention be paid to how scientific knowledge is generated. We want to educate people about science itself, how it works, why it is important. We want to encourage people to think like scientists, to ask questions about the world around them, to seek answers, and to appreciate the

mysteries of the world. Our goal is to encourage people to question and learn more about the world around them – from the production of the food they eat, to the smartphone in their pocket. We want to encourage interrogation of how science works. We want to convey that science is complex and not always uncontroversial, such as climate change and evolution.

Life-long learning for everyone

Ngaren’s educational model is based on the concept of life-long learning. We will therefore design the museum and educational offerings to cater to people of all ages, backgrounds, and levels of education. The goal is that everyone who visits Ngaren will learn something, and gain new insights. The core promise of Ngaren is that it will promote critical thinking and scientific inquiry, encouraging visitors to identify problems and ask questions, evaluate information and data, and draw conclusions from evidence. Then, with the knowledge and empathy Ngaren gives people, they will be better informed, inspired and empowered to support the future of the human family and our planet.

This is the overall key message of Ngaren. Therefore, when visitors leave the museum, we hope they will be motivated to continue to learn and make changes in their behaviors. As part of the Ngaren experience and brand, online and offline content will be created that will be available at the museum and on the website and online portals, through educational offerings and in the live streams of conferences.

The brand of Ngaren will continue to develop materials, offerings and content that will establish Ngaren as a world-class scientific brand.



A wide-angle landscape shot of a prehistoric savanna. In the foreground, two large elephants stand on a grassy ridge. In the middle ground, two small, upright, human-like figures are walking across a dry plain. The background features a large, conical volcano with a plume of smoke rising from its summit under a blue sky with scattered clouds. The left side of the image shows a steep, forested hillside.

Suddenly, I am back in time **2 million years** ago.

There, I see a **two-legged figure** walking.

It looks **human** to me.



Why Ngaren?

“Ngaren” means “the beginning”. It is a word from the language of the Turkana, the inhabitants of the area in Northern Kenya where Richard Leakey and his family have pioneered and made scientifically significant discoveries on human origins and evolution. This region is an extraordinary window into the past, with rich fossil layers that encapsulate major evolutionary events from the Mesozoic era to the present. It is in the Turkana Basin that the Leakey family initiated a series of groundbreaking hominin discoveries spanning more than 4 million years of human evolution. Among these, Turkana Boy is the most complete hominin ever found – a unique specimen of immense scientific importance to interpret our human journey.



Ngaren means **“the beginning”**.

It is the beginning of a journey.

A **marvelous one** that began a long time ago.

The human journey. **Your journey.**

A journey into the past.

In search of your **origins.**

To discover your **identity.**

Your **kinship.**

Your place within nature. Your **humanity.**

It is a journey to understand **who you are** and where you're heading.

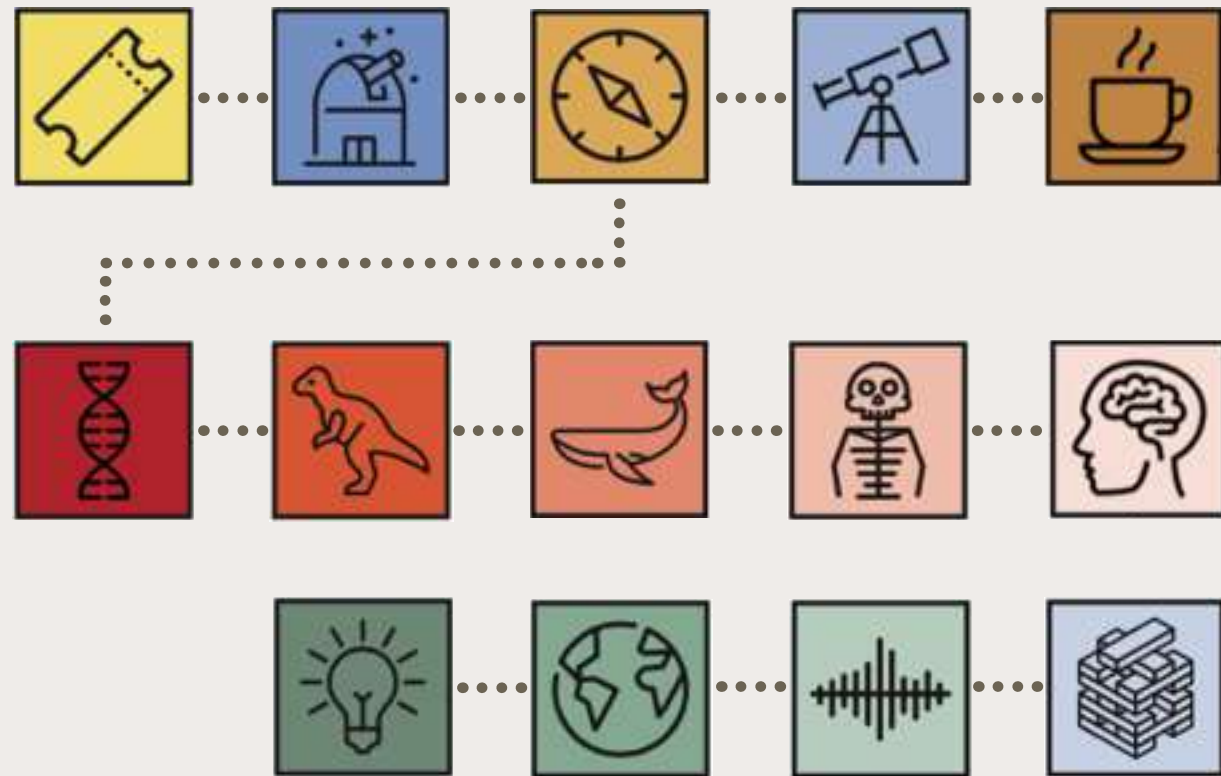
A journey of intellectual **enlightenment.**

Full of amazing encounters.

Key messages

Ngaren's mission is to translate the science of human origins into content, because this story is extraordinarily relevant to how we as human beings understand our place on earth, who we are in fact, how we live our lives, our impact on the environment, and how we will continue to survive on this planet. This story shows us:

- that we are interconnected with all life;
- that we are all one people, with common African origins;
- that we are more similar than we are different;
- that skin color and nationality are irrelevant;
- that climate and our mutual relationship with nature are crucial to our survival.



<div></div> Welcome hall <div></div> Dome <div></div> Orientation Hall	600 sqm 800 sqm 600 sqm	Treasure rooms: <div></div> Symphony of nature <div></div> Homage to humanity <div></div> A treasure trove of ideas	400 sqm 400 sqm 400 sqm
Research rooms: <div></div> A field of Pancakes <div></div> A dinosaur in Africa <div></div> A whale in the desert <div></div> A skeleton of a boy <div></div> A face whith a chin	500 sqm 1200 sqm 1000 sqm 1200 sqm 1200 sqm	<div></div> Terrace cafeteria <div></div> Exploration station	600 sqm 600 sqm

The Storyline

Ngaren: The Museum of Humankind is intended to be the museum of the “human journey”. The visit to the museum is being designed so that visitors to Ngaren will travel through the rooms and galleries on a journey that mimics a real-life journey:

- the **Welcome Hall** is where visitors will prepare for their journey – here they will buy or check their tickets, take off their coats, and start planning their visit with the assistance of helpful and welcoming Ngaren staff;
- in the **Planetarium** visitors will then be given a preview or overall glimpse of what the Ngaren journey will entail. A digital show will help visitors develop a mindset for their journey and further prepare for their voyage;
- the **Orientation hall** is where visitors will be able to create a connection with the location, the Great Rift Valley, and their African ancestors. Here, visitors will also be told important information on safety, and logistics, and be able to choose the path through the museum that they prefer;
- if desired, visitors can then go outside to the **Exploration Stations**, to explore the surrounding landscape and get more information on its scientific interpretation. This will allow them to take the most advantage of the museum galleries. This option will be available at any time during the visit to the museum;
- the five **Research Rooms** are the “proper” museum galleries – each is a container holding unique stories. The stories are all introduced by “protagonists” that welcome visitors into the galleries. The Research Rooms are connected to each other through an underlying storyline – the story of humankind presented to the visitor as a serendipitous evolutionary journey: from the origin of life (A field of pancakes), through

the dinosaurs’ extinction (A dinosaur in Africa), the rise of mammals and the diversification of primates (A whale in the desert), to the start of the hominins’ line (A skeleton of a boy) and the spread and survival of Homo sapiens – the only hominin species alive today (A face with a chin);

- the **Evolutionary Game Room** is a gallery full of individual and social/group interactive games for visitors of all ages. The activities in the Game Room will be designed to deepen a visitor’s understanding of the mechanisms of evolution and cooperation, in a playful, more approachable way. In this gallery visitors can discover new things about themselves. They will realize that humans are inventive, smart, and cooperative, as well as competitive, or perhaps feel empowered to make changes in their own personal behaviors. Here, the message will be that individuals can change the world, and that we live in a world worth being treasured;
- the visit to Ngaren then continues with three **Treasure Rooms** which will be immersions into the beauty and importance of biodiversity. These rooms will make visitors experience that all humans are part of nature, and that we are all connected to each other, and to the rest of life on this planet. These rooms will emphasize that we are members of one big family of humans, and illustrate the importance of taking care of the planet which is our one and only home.

A high-resolution satellite image of Earth from space, showing the African continent and surrounding oceans. The image is taken from a perspective that shows the curvature of the planet. The landmasses are in shades of brown and tan, while the oceans are a deep blue. White clouds are scattered across the surface. The background is a dark, star-filled space.

Ngaren is a journey into the past,
in search of **your origins.**

Wherever you go, whatever you do,
you leave **traces** behind.

Humans are **not the pinnacle** of evolution.

We are part of nature and **interdependent** with each other and the rest of **nature**.

The narrative

Our planet is our home. It is beautiful, amazingly diverse, but also quite fragile. Each of us shares a common story of how we came to be who we are today. At Ngaren, you too will be a protagonist in the marvelous story of life. Welcome to Ngaren where this story will rapture your heart and mind. (Planetarium)

Before starting your journey into Ngaren, you will want to acquire the right tools to get oriented for your journey. Experience how tiny you are before nature. **You are in the Great African Rift**, a beautiful and magnificent place that has emerged from the uplifting of the earth’s mantle. It roars of the power and dynamicity of nature: although you don’t notice it, it keeps moving under your feet. **It is also a very symbolic place for your human journey:** it records the longest time span of human history – more than four million years of human evolution in many different forms. **Two million years ago you would have met your ancestors fetching water in the rift lakes.** You are suddenly back then: there are human-like figures in the distance. They are your ancestors. (Orientation Hall)

This introduction is only a glimpse into what you will see and learn inside Ngaren. You will need to trust that all that you will see, learn and experience during your journey is real, validated by facts, by scientific evidence. **The past is preserved in what we find in the present**, and more and more we have sophisticated tools to be able to interpret it. **Through science we can disclose an otherwise unknown story.** (Exploration Stations)

Through the fossil and other scientific evidence, we know that life started way before human life on Earth and that all life descends

from one single common ancestor. **You are part of life, like any other extinct and living being on Earth.** Do you know that you share 60% of your DNA with a banana? (A field of pancakes)

Even dinosaurs are part of this story. They dwelled in a very different world from today for 160 million years, and despite their success they became extinct during the last mass extinction, 66 million years ago. However, life did not cease completely, rather new ecological niches opened up for other life forms. This is how mammals began to thrive and diversify, becoming the new rulers of the planet and reaching enormous sizes too. **Without the dinosaurs’ demise, even humans wouldn’t be here. You, yourself, wouldn’t be able to exist on this planet.** This is evolution. (A dinosaur in Africa)

The story of life is full of amazing stories. Important fossils of whales uncovered from sandy deserts in North Africa are keys allowing scientists to reconstruct their evolution over forty million years and piece together the larger story of life on this planet. Whales are marine mammals who evolved from terrestrial mammals that slowly moved to the sea, losing bits of a typical quadruped’s skeleton on the way. During this time, lands and oceans shifted, climates changed dramatically, and evolution ran its course. Meanwhile, primates – a big and extremely diverse group of arboreal animals that includes living lemurs, monkeys and apes – were thriving and radiating in a world of lush forests, until the Great African Rift slowly changed the uniformity of the African continent. On both sides of the rift, lands were rising up, becoming barriers for moisture circulation and favoring the formation of mosaic habitats of woodlands and grasslands, from whence your ape ancestors started to abandon

their arboreal lives, slowly transitioning into a terrestrial locomotion on two feet. **Your ancestors’ journey had no destination, was one of chances, with many experiments and failures. This too is evolution.** (A whale in the desert)

So, you have now learned that the human lineage is rooted in Africa. We share a last common ancestor with living chimpanzees around seven million years ago. **More and more, new fossil, behavioral, genetic, and environmental evidence explain the story of the hominin lineage in details.** This work would be impossible without the work of scientists like the Leakeys in East Africa. **Fossils show that two million years ago there were hominins that look more human than not.** What does this mean? Not only bipedal, with small jaws and big brains, but also behaving more and more like us. **This is why Turkana boy touches your heart:** though not yet as intelligent and technological as you, he could have not survived without the support of his community. Compassion and cooperation were part of our successful adaptation as a species. We are the outcome of evolution. (A skeleton of a boy)

Today, sapiens is the only hominin species alive. However, we weren’t alone on the planet, both in Africa, and out of Africa, until quite recently. Our species evolved in Africa and moved out of Africa colonizing every corner of the world. In the process, other hominins that formed a fragmented regional variation derived from earlier migrations were assimilated or outcompeted. This is true for species such as the Neanderthals, the Denisovans, and perhaps multiple other species that have yet to be discovered. All living humans today are *Homo sapiens*, regardless of differences in color of skin, shape of eyes, susceptibility to particular diseases or food intolerances. **We all share a common ancestor in Africa. This means that**

we are all from Africa and universally human. (A face with a chin)

So, what makes you human? One of the traits we share as humans is hyper-sociality – a strength, an adaptational advantage, and a beautiful product of evolution. Together we have been able to form communities looking after each other, developing reciprocity to strengthen useful bonds, enlarging networks, spreading beyond our biological limits. What happens if you don’t collaborate? You can test these hypotheses live. **You realize that we are all interconnected, wired in the web of life with animals, plants, and each other.** Being cooperative and helpful is an evolutionary advantage. **We need each other.** (Evolutionary Game Room)

In a world in constant change, we must value biodiversity as something fundamental for humans’ sustainability. It is time to appreciate nature with all your senses. **Biodiversity is beautiful and important; it is worth being taken care of.** (Symphony Room)

Human cultural diversity is an immense treasure as well. It is expressed through a variety of languages, behaviors, and cultures - the legacy of a pre-globalized world and yet what make us who we are today. **We want to keep honoring our roots like a family heirloom.** (Homage to Humanity)

After this long and adventurous journey, you may want to share your thoughts, experience and commitment to continue to treasure the world and all humanity. You are more empowered now that you know that we are one people. **Every journey starts with a single step.** (A treasure trove of ideas and great minds)



Every journey starts with a single step.

Gallery	Objective	Learning outcome	Key message	
	The Dome	To shape the mindset; to make visitors feel tiny before the immensity of the universe and the beauty of life, opening up to questioning their human exclusiveness.	We are part of nature; we are all connected.	We are all connected.
	The Orientation Hall	To immediately connect visitors with the environment and the past.	There is a strong connection between human evolution and this place.	This is where we all come from.
	Exploration stations	To have visitors read the book of nature.	Knowing our environment through sediments and fossils is key to understand our past.	The present is the key to the past.
	A field of pancakes	To introduce visitors to the time depth of the origins of life and the mechanisms of evolution.	Evolution explains life on Earth.	All life has one common ancestor.
	A dinosaur in Africa	A wow experience into the African dinosaurs’ world; to make visitors realize that nothing in life is permanent.	Despite their success, dinosaurs went extinct. Their demise opened up for mammals’ success.	Everything changes.
	A whale in the desert	To educate visitors on their mammalian origins and evolution as primates.	Humans are apes.	Environmental changes trigger evolution over time.
	A skeleton of a boy	A mind-blowing encounter with Turkana Boy; to persuade visitors that evolution applies as much to humans, as to any other life forms.	Africa is humanity’s homeland.	Evolution applies to humans as well.
	A face with a chin	To make visitors understand that we are all part of one same family of humans.	We are all from Africa . Our differences are expressions of our evolutionary history.	We are universally human.
	Evolutionary game room	To make visitors experience how cooperative they are by nature and sense their connection with biodiversity.	By cooperating and using our brains we can change our behavior for the better.	We need each other.
	Symphony room	To appreciate nature with all senses.	We need to take care of our world.	Our planet is our home.
	Homage to humanity	To value human cultural diversity.	Human diversity is something to respect and protect.	We are all one family.
	A treasure trove of ideas	To inspire and empower visitors to support the future of the human family and planet.	There is a lot we can do.	Every journey starts with a single step.



CONTENT CONCEPT



Planetarium

Objective: To shape the mindset; to make visitors feel tiny before the immensity of the universe and the beauty of life, opening up to questioning their human exclusiveness.

Learning outcome: We are part of nature; we are all connected.

Key-message: We are all connected.

You start your journey with an all-digital movie that takes you into the universe, the Milky Way, our solar system, and then zooms-in onto our little blue planet: Earth. You will be surrounded by images of different ecosystems, from all continents and oceans, with beautiful landscapes and iconic animals. You will see faces of people from all over the world and you will recognize yourself on the screen: the picture that was taken when you purchased your ticket is being used in the movie, but only during your view. The voice-over recites: “This is your birthplace. Ngaren is where the story of humankind unfolds. Here you will experience your human journey with all your senses, mind, and heart – how you came to be the walking upright, intelligent, social, inventive, and compassionate human being that you are. Starting from a tiny particle in the water billions of years ago, you are going to experience that coincidence was a big part of your journey: being a mammal when an asteroid put an end to the dinosaurs’ rule; effectively adapting to unceasing changes in the environment that caused extinction throughout; being the only hominin alive today, among many others that you will encounter during your visit. Welcome to Ngaren, where the human journey begins”.

Size: 800 m²

Type of gallery: Immersive; hearts-on.

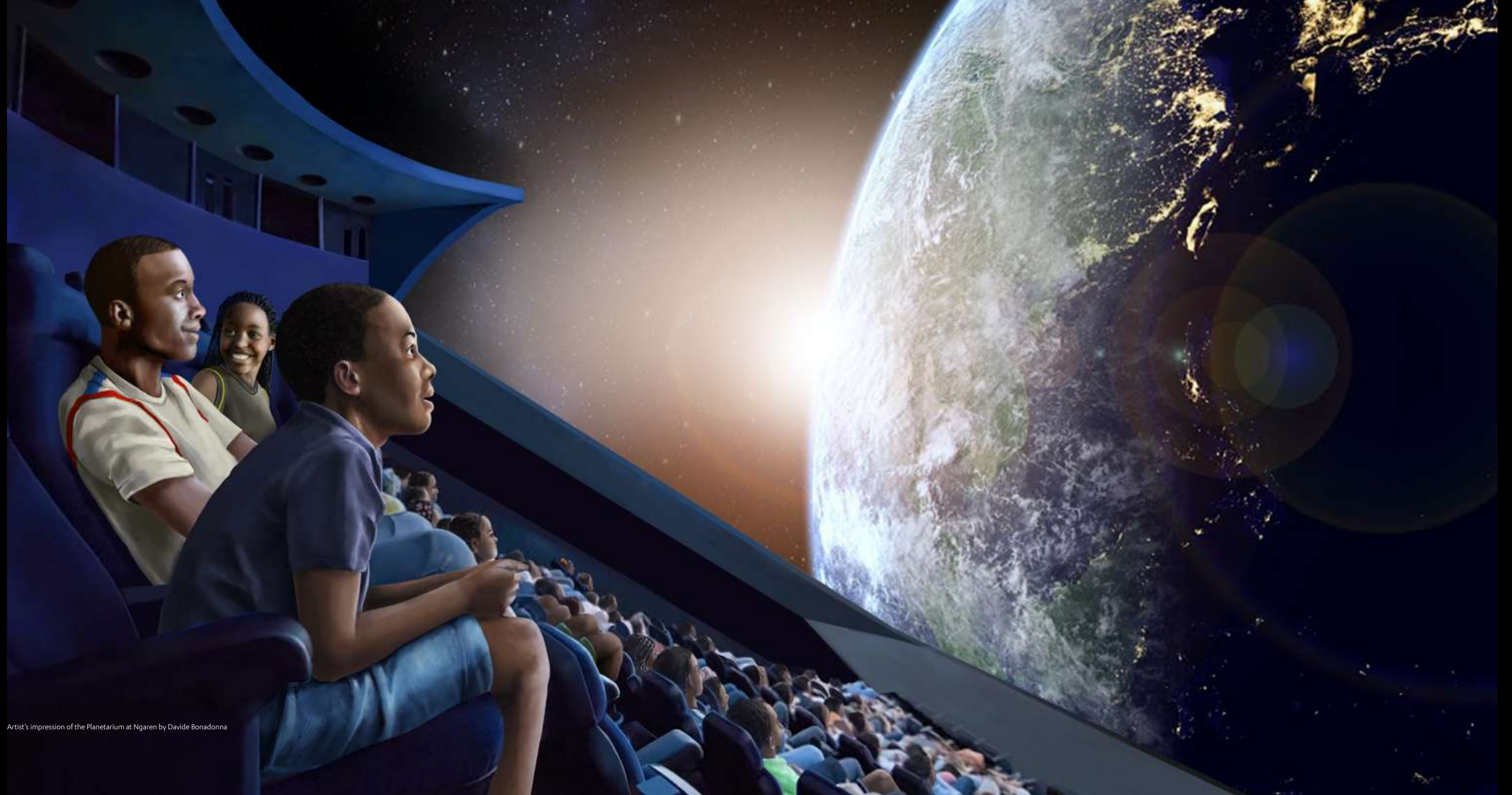
Holding power: 15 minutes.

Icon: The Dome.

Must-sees: All-digital IMAX movie.

Collection: None.

A journey into the universe to shape the mindset:
we are part of nature, **we are all connected.**



Artist's impression of the Planetarium at Ngaren by Davide Bonadonna



Orientation hall

You are standing on the Great Rift Valley, a key landmark for the human journey. It is beautiful and magnificent. It is a natural environment, the result of natural processes, that happened during tens of millions of years. Here you connect with the environment and with the past.

Objective: To immediately connect visitors with the environment and the past.

Learning outcome: There is a strong connection between human evolution and this place.

Key-message: This is where we all come from.

When you exit the planetarium, you enter a spacious atrium with wide glass windows overlooking the Great Rift Valley. There's a strong connection between you and the environment. The hall is a dialogue between the inside and the outside, between the past and the present. The landscape changes depending on the time of the day, weather, season. On bright days you can see the white top of the Kilimanjaro, further to the south.

While you are looking at the landscape as it is now, suddenly you travel two million years back in time! Through an innovative system, the transparent glass fades into images of that original landscape with virtual hominins of australopithecines and early Homo roaming across the valley - volcanoes fuming in the distance. It's fascinating! You are starting to connect with your ancestors. It is a glimpse of what you are about to learn and experience inside the galleries. You are becoming eager to see the rest of the museum.

Have you ever wondered how the Great African Rift was formed? What you see is a landscape that has emerged from the uplifting of the earth's mantle. If you look carefully, you can identify colored layers - different shades of brown, red, and yellow. They tell a story

of volcanoes, wind, water, rain, sunshine, heat, plants, animals, and microorganisms. It is a story of geology, climate, and evolution – the natural process that causes life to change over time.

If you want to learn more about the formation of the Great Rift valley and why it is a special place to find fossils, go to the terrace. You may do that anytime during your visit, or while having a coffee and samosa break. You will find several exploration stations there to help you read the landscape.

In the Orientation Hall, you will also find information about how to navigate inside Ngaren, including fast tracks to a particular gallery. There are five research rooms where you can learn about nature, experience the scientific method, and build up empathy with nature and your human family.

Size: 600 m²

Type of gallery: Experience; hearts-on.

Holding power: 5 to 10 minutes.

Icon: Magic window.

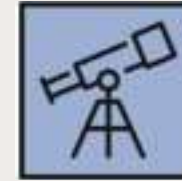
Must-sees: 'A glimpse into the past'.

Collection: None.



Artist's impression of the Orientation hall at Ngaren by Davide Bonadonna

You are learning to **read the earth.**
You understand the **connection**
between the **environment** and **you.**



Exploration stations

Objective: To have visitors read the book of nature.

Learning outcome: Knowing our environment through sediments and fossils is key to understand our past.

Key-message: The present is the key to the past.

There are scientists that are experts in reading the earth's layers. With the help of an exploration station, you too will be able to read the surrounding landscape. It is fun and useful, and it helps you understand the big temporal and physical processes underlying the evolution of life, of which you are part of.

Earth's surface may seem solid, but it is mobile, migrating over hundreds of millions of years to form continents, islands, and oceans. It is always moving: along cracks in the earth's crust, volcanoes blow melted stone and ashes into the sky, earthquakes violently shake the lands as large parts of the earth's crust, the tectonic plates, drift slowly apart. The land is pushed up to form mountains and erosion wears them down again. The land you see in front of you wasn't always like you see it now and won't be like this in the future. The world is changing constantly, slowly, but non-stop.

The Great Rift Valley is a fossils' hotspot. Amazing evidence of the origin and evolution of humankind in East Africa is eroding from its sediments, along with paleoenvironmental data that allow the reconstruction of climate and ecology at different times.

Touch screens, animations, film images, and augmented reality will help you read the environment. Do you want to see how the landscape in front of you was formed? Look through that telescope: you will see an outline of the mountain to distinguish the build-up of layers that formed that particular section over many millions of years, at different climate and environmental conditions.

Type of exhibits: Hands-on.

Holding power: 10 minutes.

Icon: Telescope.

Must-sees: Rift valley through AR telescopes.



The present is the **key** to the past.
You will **no longer** see the world with the **same eyes**.

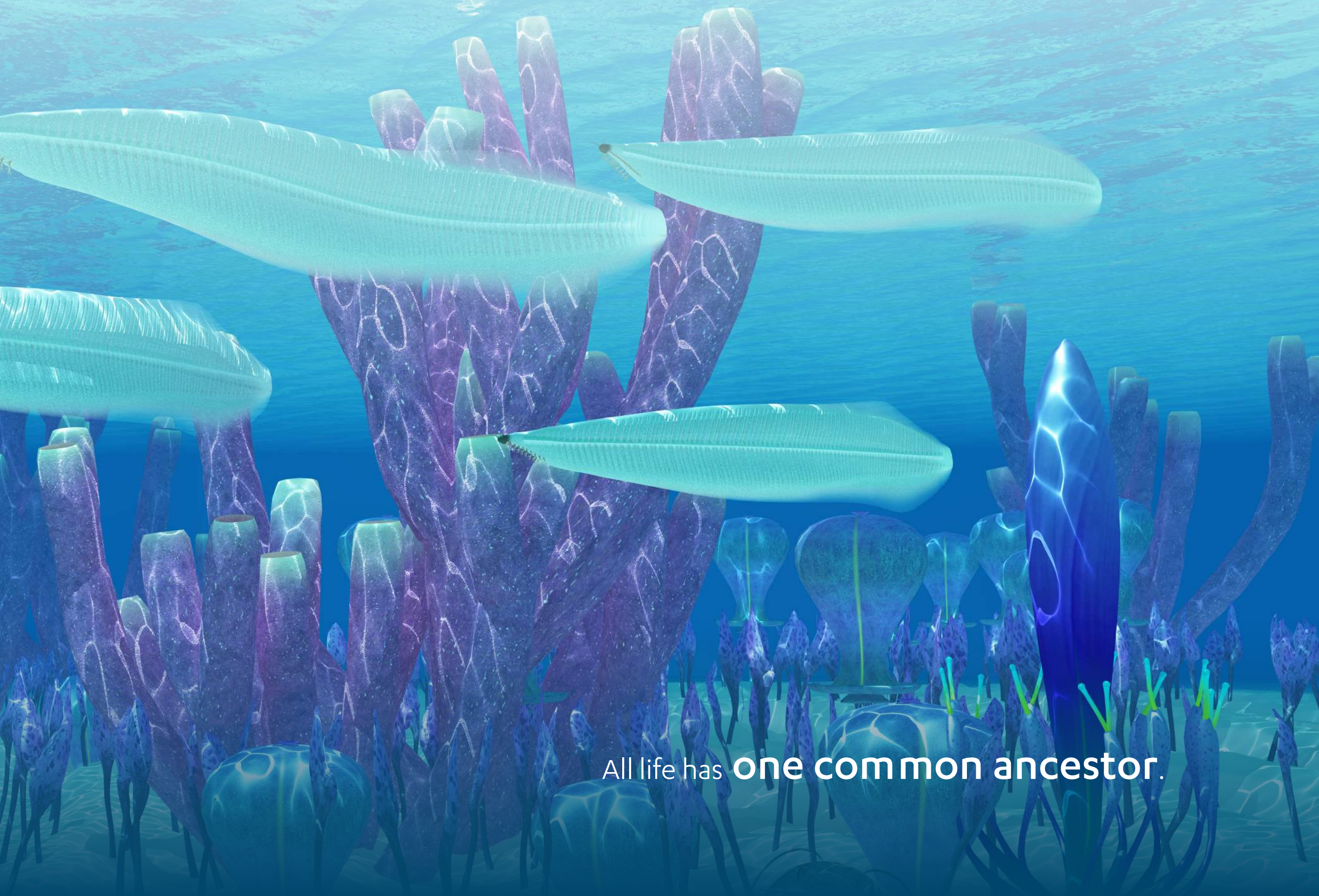
Research rooms

What we find in the geological, paleontological, and – increasingly – in the genetic record are snapshots of something that happened a long time ago. The history of life for a very long time did not include humans, as we appear only at the very end of the evolutionary journey that began billions of years ago. Experiences, hands-on learning, and games will trigger your personal investigation into humanity's origin, evolution, and their migrations to every corner of the world. Throughout the museum galleries, you will have surprising encounters and make amazing discoveries that will help you grasp that climate and environmental factors have always been driving forces of evolution and have greatly affected the human journey. In what way are they affecting your future?

You are free to visit these galleries in the order you like, but if you prefer a chronological path you may follow the designated route. They are called after their protagonists.

1. A field of pancakes
2. A dinosaur in Africa
3. A whale in the desert
4. A skeleton of a boy
5. A face with a chin

The first two galleries are dedicated to the origin of life and the time of dinosaurs, a deep past that connects to your human journey by explaining the time scale of evolution, the relationship of all life since the beginning, and its impermanence due to dynamic natural processes that happen inevitably. The other three galleries take you through your evolutionary journey of humans in and out of Africa, revealing a serendipitous story about how you got here.



All life has **one common ancestor.**



A field of pancakes

Objective: To introduce visitors to the time depth of the origins of life and the mechanisms of evolution.

Learning outcome: Evolution explains life on Earth.

Key-message: All life has one common ancestor.

A replica of a field of fossil stromatolites on the floor opens a gallery on the origins of life and the physical elements necessary to sustain it, more than three and a half billion years ago. Stromatolites are layered rocks of different and fascinating shapes that form in shallow waters by sticking and cementing microorganisms with mineral grains. You realize that water has always been vital for life.

Stromatolites occur widely in the Precambrian, they are the earliest evidence of photosynthetic bacteria adapted to water. What links us to these bacteria and other types of single-celled organisms, the archaea, that developed next? For two billion years, bacteria and archaea were the only life-forms on Earth. Then something extraordinary happened: a bacterium worked its way inside an archaeon and survived, starting a mutually beneficial relationship. As a result, complex life could emerge. Everywhere in the gallery around you, you can see wonderful creatures swimming: sponges, mollusks, worms, arthropods, brachiopods and echinoderms, bivalves, trilobites, and prawns. They are part of the Cambrian explosion of life, 50 million years ago, when different animals' building-plans started to develop. One of these creatures, *Pikaia gracilens*, turned out to have a rudimentary spinal column, making it one of your earliest ancestors. Look, there it swims!

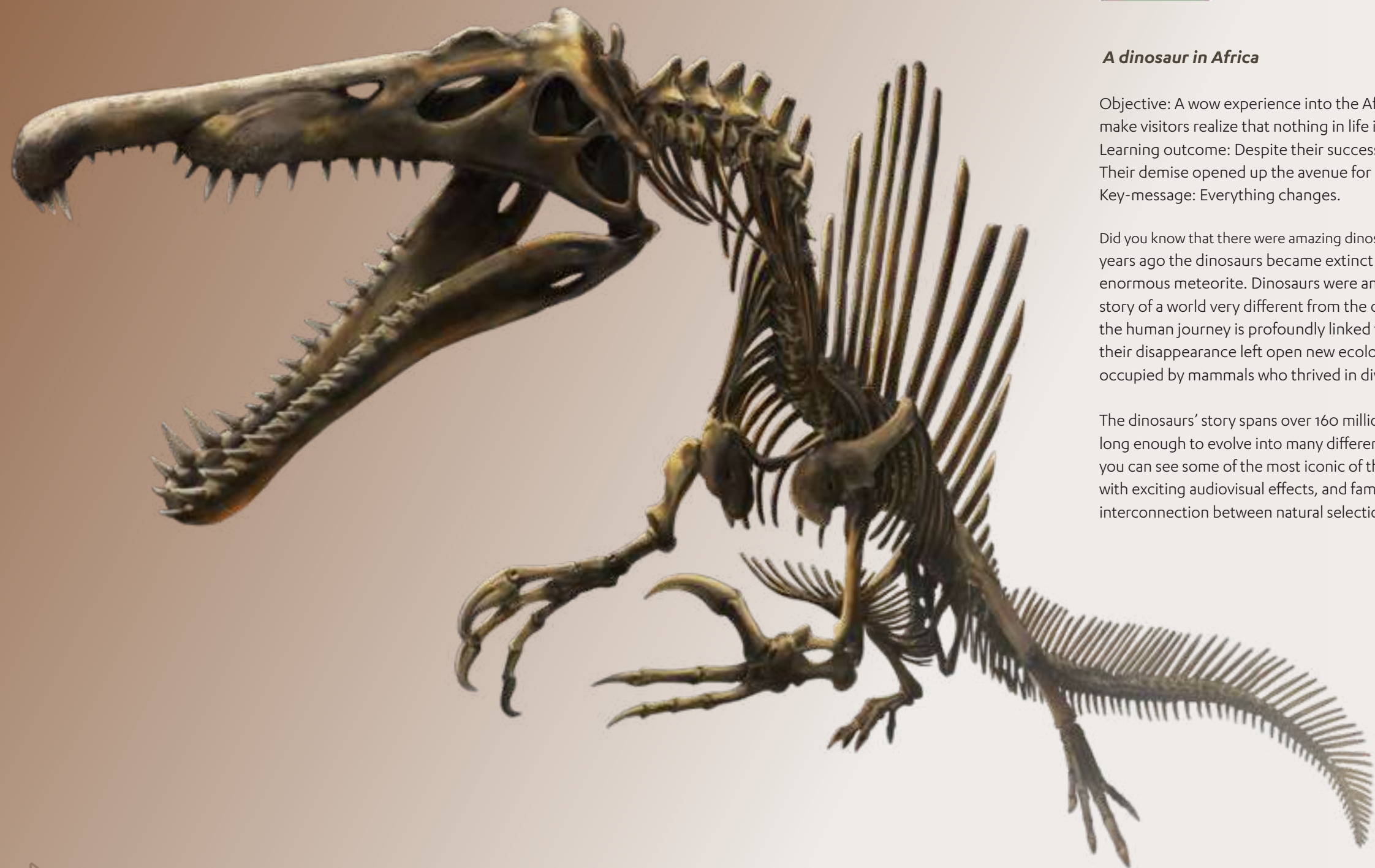
Size: 800 m²

Type of gallery: Immersive.

Holding power: 10 min.

Icon: Stromatolite.

Must-sees: Interactive steppingstones floor.



A dinosaur in Africa

Objective: A wow experience into the African dinosaurs' world; to make visitors realize that nothing in life is permanent.

Learning outcome: Despite their success, dinosaurs went extinct. Their demise opened up the avenue for mammals' success.

Key-message: Everything changes.

Did you know that there were amazing dinosaurs living in Africa? 66 Million years ago the dinosaurs became extinct after the earth was hit by an enormous meteorite. Dinosaurs were amazing creatures that tell the story of a world very different from the one we now know. However, the human journey is profoundly linked to the dinosaurs' extinction: their disappearance left open new ecological niches that were occupied by mammals who thrived in diversity since.

The dinosaurs' story spans over 160 million years, an enormous period, long enough to evolve into many different forms and sizes. At Ngaren you can see some of the most iconic of these animals, combined with exciting audiovisual effects, and familiarize yourself with the interconnection between natural selection, environment, and luck.

To have a taste of what the world looked like in the age of dinosaurs, stop at this video station and watch an animation of the orogeny and break-up of the Pangea supercontinent. Here you can learn more about plate tectonics and discover how very old the African continent is. And do you realize how big Africa is? Due to a distortion in common Mercator projection maps, Africa is perceived as much smaller than its actual size. You will be surprised to know that with more than thirty million square meters it can fit China, India, Japan, Mexico, all of the US, and several European countries, all combined. Play with the puzzle right there to fit as many countries as you can!

African dinosaurs are fascinating and largely unknown to the public audience. Ngaren will show you real fossils and real size replicas of some of the most iconic of them. Spinosaurus welcomes you to this grand gallery. A giant river monster bigger than T. rex, it is the first dinosaur that took to water, evolving a croc-like snout and a phenomenal tail to thrust in river waters and hunt enormous fish. You are one hundred million years back in time when Africa and the whole world were very different from today. Your journey across African dinosaurs is full of real size fossils and replicas of unique specimens. And VR immersions in a mind-blowing Paleo-aquarium!

Size: 1,400 m²

Height: It needs to accommodate tall dinosaurs like *Giraffatita* (ca. 16 m).

Type of gallery: Immersive; hearts-on; hands-on.

Holding power: 20 min.

Icon: *Spinosaurus*.

Must-sees: African unique specimens reconstructed in real size and the Paleo-aquarium.

Collection wish list:

- *Spinosaurus*
- *Giraffatitan*
- *Carcharodontosaurus*
- *Mosasaurus*
- *Pterosaurus*
- *Kentrosaurus*
- *Ouranosaurus*

Additional items for a pan-African collection:

- *Saturnalia*
- *Heterodontosaurus*
- *Massospondylus*
- *Atlasaurus*
- *Dryosaurus*
- *Suchomimus*
- *Paralititan*
- *Angolatitan*
- *Majungasaurus*.



A whale in the desert

Objective: To educate visitors on their mammalian origins and evolution as primates.

Learning outcome: Humans are apes.

Key-message: Environmental changes trigger evolution over time.

The fossilized snout of a whale is found more than 700 km inland from the present coastline of the Indian Ocean, at an elevation of 600 m above the sea level. Today this is a semi-desert in West Turkana: how is that possible?

This story started 17 million years ago, when East Africa was very different from today. The Great African Rift wasn't there yet, and a big river connected the Indian Ocean with lakes deep inside the African continent. Where there is only sand today, a beaked whale managed to mistakenly enter a river from the ocean and got stranded in shallow waters. The climate was also very different from today: it was wet and humid, with vegetation that would resemble lowland tropical forests.

You can see a variety of primates, hanging from the trees. Some have tails, some have not. These latter are apes, like today chimps, bonobos, gorillas, orangutans and... humans!

In the same period of time (Miocene, 23-5 million years ago), when global climate was warmer and the whale was swimming in the river, there was an extraordinary diversity of apes. Fossil deposits in Kenya and Uganda provide for amazing evidence, like *Proconsul africanus* the first and best-known Miocene ape found in Africa. Look at the fossils: you can touch them and get familiar with differences in size and shape of teeth and bones. Miocene apes varied largely in size. Their dentitions and skeletons, though fragmented, tell a story of different adaptations to forested environments. You are now able to tell from a bone fragment how that animal moved. And the size of a canine might tell you a lot about the social system of that animal's group.

This room provides lots of insights on how evolution works, exploring on the evolution of mammals after dinosaurs became extinct.

Size: 1,200 m²

Type of gallery: Immersive; hands-on; hearts-on.

Holding power: 15 minutes.

Must-sees: Theatrical animation of the whale in a changing environment.

Icon: The Turkana beaked whale fossil.

Collection wish list:

- replica of the Turkana fossil whale snout and relative model;
- real size models of extinct fauna and plants contemporary to the Turkana fossil whale;
- skeletons, teeth, and models of Miocene apes (to name a few *Aegyptopithecus*; *Proconsul africanus*; *Proconsul major*; *Proconsul gitongai*; *Kenyapithecus*; *Victoriapithecus*);
- real size models of living great apes.

We will tell the story of our common **African origins** through immersive exhibits,
compelling **protagonists**, and state of the art science storytelling,

that will **empower** people to use **scientific thinking**,
to make **better decisions** about the **world** they live in.





A skeleton of a boy

Objective: A mind blowing encounter with Turkana Boy; to persuade visitors that evolution applies as much to humans, as to any other life forms.
Learning outcome: Africa is humanity's homeland.
Key-message: Evolution applies to humans as well.

He was found almost complete, which is already exceptional. He was found in Turkana, on ancient lakeshores. He lived about 1.5 million years ago. At that time, lake basins are found all along the Kenyan Rift valley and volcanoes are bubbling lava. Tectonic forces have formed and modified this landscape over hundreds of thousands of years, breaking and lifting the earth, repeatedly changing the shape and size of catchments and drainage networks – and with it, rainfall. Forests have disappeared to give way to savannah and open habitats full of mammals resembling today's wildebeest and giant warthogs. Look through the binoculars: there is a boy by the river. He is Turkana boy.

He is about 10 years old. His teeth speak of a younger age, his skeleton indicates an older individual: he is quite tall and lean, walking on two feet. His braincase is smaller than yours, yet bigger than other hominins. What does that tell you? His cognitive capacities were not quite as good as yours. However, he and his people were knapping beautiful stone tools already, shaped like big almonds. They are called Acheulean handaxes. Have a look at these very old examples and play with models of some of them. That video screen shows you how they were manufactured by modern flintknappers and you can see this 'live' during our science sessions. They are worked bifacially into symmetrical tools of different sizes. Some are really huge! In Olorgesailie, not far from here, you can walk over fields where many are found in association with butchered animal bones. What other types of stone tools are found in the hominins' fossil record? What do they tell about their intelligence? Dig deeper in that side room, where you can also get to know the Lomekwi stone tools dated 3.3 million years ago, the oldest ever found.

Evolution applies to **humans** as well.

The Turkana boy's skeleton also tells a story of disease and compassion: a malformation of the spine was probably the cause of his death, but it also shows that his community took care of him, as he would not have survived until the age of ten otherwise. This resonates with feelings that you too have. Talk to him! A virtual model is there to interact with you. When did we start developing compassion? Is this an ingredient of the evolutionary recipe that made us the social, intelligent, problem-solving beings that later went all over the world? Actually, hominins like the Turkana boy were leaving Africa already, as shown by some key fossils from China, Southeast Asia and Europe! There is a dedicated exhibit telling you more about it.

But ... wait a minute: who are all the others? Models of early hominins are all over the room. You can finally meet all your early African ancestors like *Sahelanthropus*, *Orrorin*, *Ardipithecus*; the australopithecines from South and East Africa including the famous Lucy, the Dikika baby, and robust *Paranthropus*; early members of the genus *Homo* – *habilis*, *rudolfensis*, *African erectus*, *heidelbergensis*. They are made by artists after painstaking consultations with scientists. You can see that they walked upright too, but there are differences. Some have arms that are quite a bit longer than yours. There are footprints on the floor... and their feet are not exactly like yours either... Their height is a bit short... And their faces ... Wow! There is so much to grasp from this gathering: who is who? When did they live, for how long, and how do we know that? What did they eat? Did they cook food already? Did they knap stone tools? Are they found in Africa only? Did they live together at some stage? Why are they no longer here? Are they part of your journey? Indeed, they are your ancestors, and their story encompasses almost 7 million years.

Size: 1,200 m²

Type of gallery: Hands-on; body-on; social-on.

Holding power: 20 minutes.

Icon: Turkana Boy.

Must-sees: the encounter with Turkana Boy.

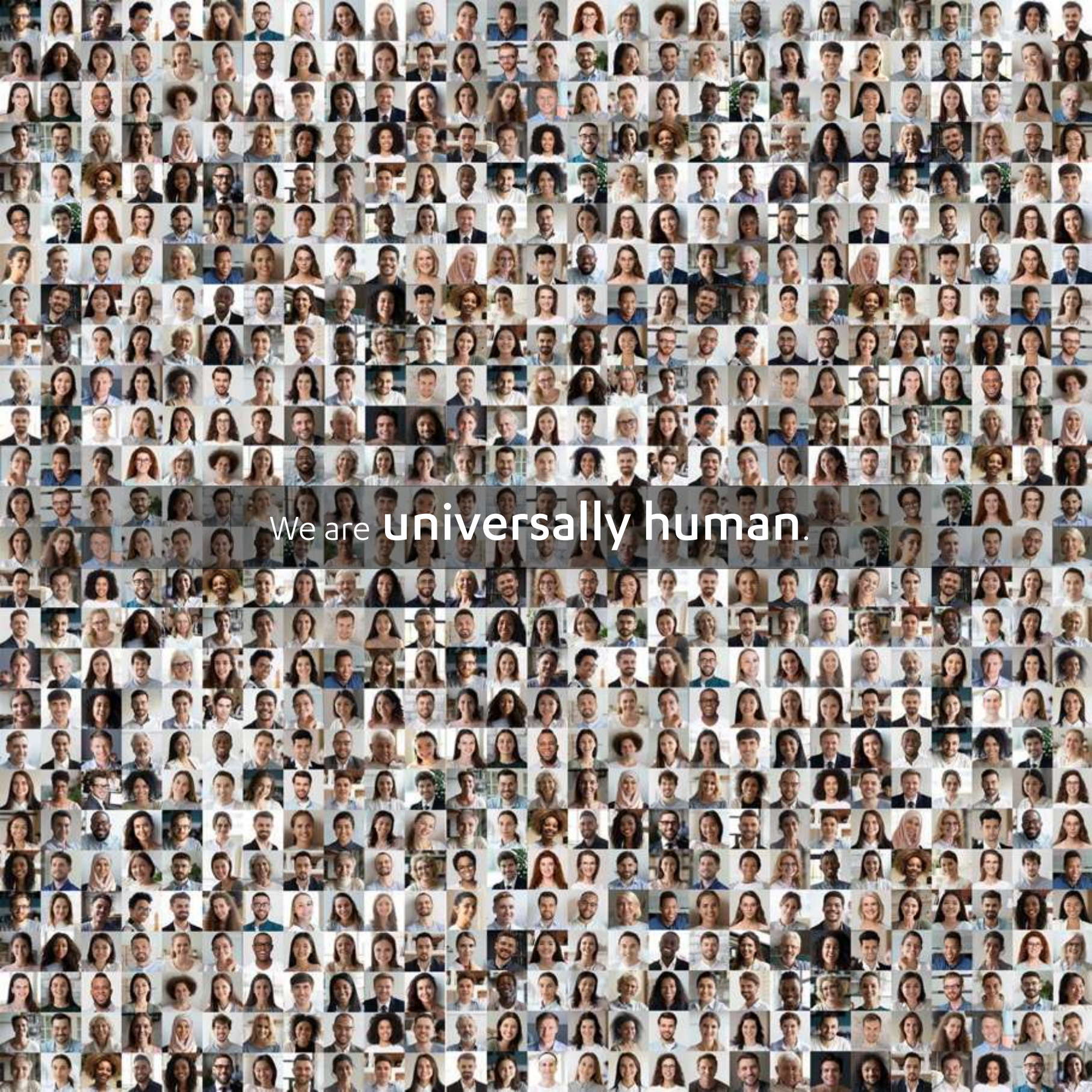
Collection wish list: the most complete collection of real size models and replicas of fossil specimens of early hominins (some enlisted below).

- *Sahelanthropus tchadensis*
- *Orrorin tugenensis*
- *Ardipithecus kadabba*
- *Ardipithecus ramidus* (Ardi)
- *Kenyanthropus platyops* (KNM-WT 40000)
- *Australopithecus deyiremeda*
- *Australopithecus africanus* (Mrs. Ples, Little foot, Taung child)
- *Australopithecus sediba*
- *Paranthropus aethiopicus* (Black skull)
- *Paranthropus robustus*
- *Paranthropus boisei* (Zinjanthropus)
- *Homo habilis* (KNM-ER 1813)
- *Homo rudolfensis* (KNM-ER 1470)
- *Homo ergaster* from East and South Africa (KNM-ER 3733; KNM-ER 3883; KNM-WT15000 Turkana Boy; DNH 134)
- *Homo erectus* (specimens from Java, China, Georgia).

You are face to face with **Turkana Boy**.

Talk to him!





We are **universally human.**



A face with a chin

Objective: To make visitors understand that we are all part of one same family of humans.
Learning outcome: We are all from Africa . Our differences are expressions of our evolutionary history.
Key-message: We are universally human.

Look at yourself in the mirror: what makes you human? You might be surprised to know that, from a skeletal point of view, your chin, along with your relatively small brow ridges and globular skull, define you as a *Homo sapiens*.

How old is your species? Real size replicas of the earliest fossil skulls of anatomically modern humans from North and East Africa welcome you to the story of your direct ancestors during the past 300,000 years. Once again, it is a story where the physical conditions of the environment drive competition, survival, and extinction. Abrupt and repeated changes in climate during the Quaternary ice age caused the extinction of almost all of the hominins that you met in the other room. Because, when ice was accumulating in the arctic, Africa dried up, forcing plants and animals to move to survive. Species that could not adapt were inevitably wiped out by natural selection. Your direct ancestors in Africa did well: by then they were highly mobile and social, as we know from the fossil and archaeological record that you have the chance to admire in this gallery.

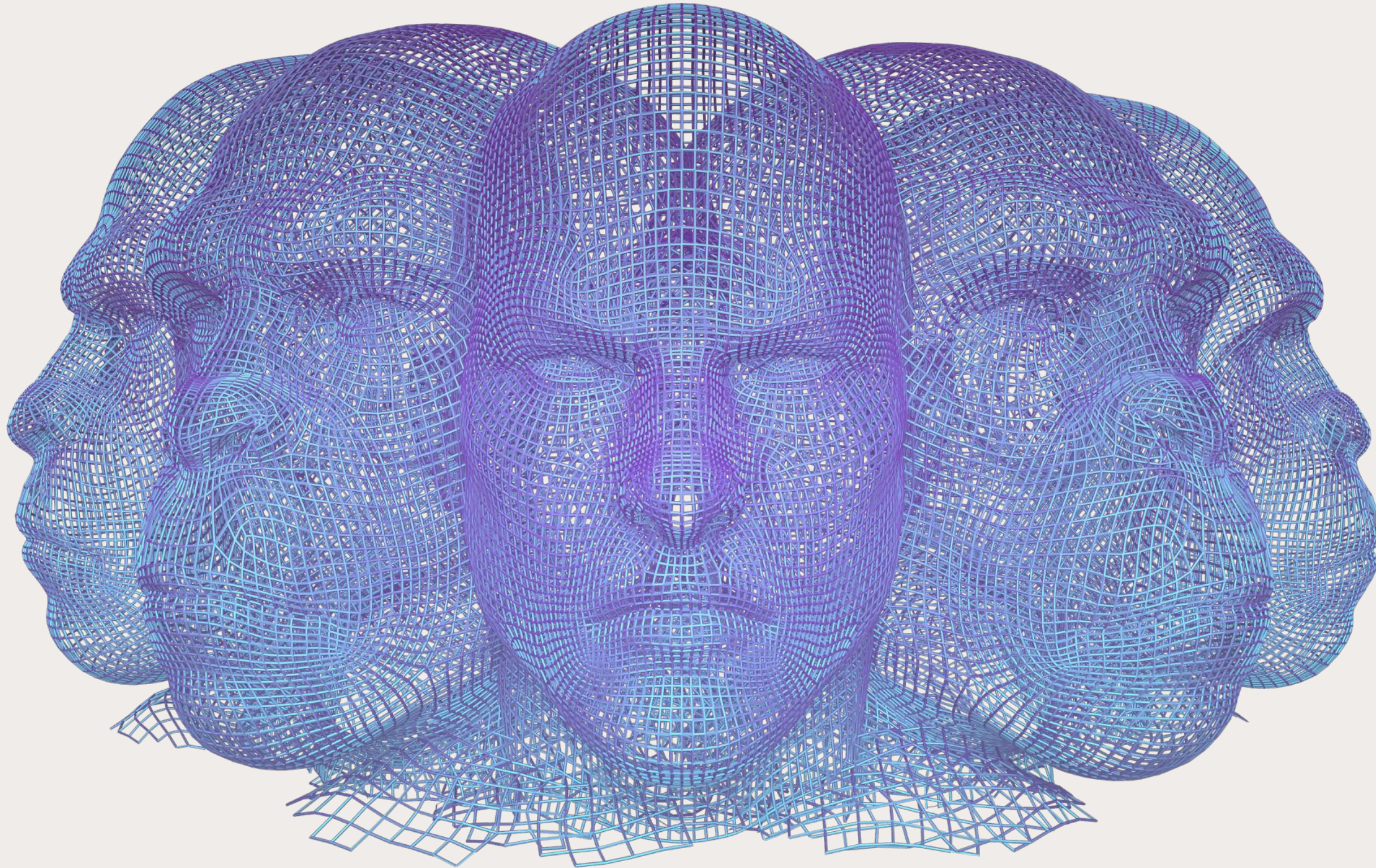
As you can see, these stone-tools are more refined than the ones you saw in the early hominins room. There is actually a correlation between time and technological sophistication, which shows you that a lot is going on in the cognitive, cultural, and social development of these people. They hunt big game and eat around fires. They knap amazing tools out of rocks. There are many different types of tools, showing that they served different purposes, like today’s hardware tools - to saw, to cut, to bash, to scrape, to drill. Try for yourself!

Your *sapiens* ancestors were also being repeatedly challenged by environmental constraints, being forced to migrate into more

hospitable regions like the Levant and South Africa at the onset of one of the glacial periods, around 110,000 years ago. They were not alone, though, for some time: the fossil and genetic evidence is starting to reveal other regional variants like *Homo naledi* in South Africa - and possibly other “ghosts” in sub-Saharan Africa. Even outside of Africa, *sapiens* are not the only ones around... In the next exhibits, you will discover the ‘out of Africa’ story, along with what was happening ‘in Africa’ meanwhile.

Your *sapiens* ancestors were not the first humans to leave Africa. Also, they didn’t leave Africa just once, but the one exit that gave rise to the rest of the living humanity can in fact be ascribed to a particular event. You may have heard of the so-called “African Eve”, a fictional woman whose mitochondrial DNA represents the origin of all the variants known in humans today, as if she was the mother of all humans that have originated since. This concept is one of the milestones in the reconstruction of the human journey and it deserves a private exhibit where you can play with evolutionary genetics: markers, mutations, bottlenecks, drift. Although these terms might sound alien at first, you will see how easily they translate a fundamental property of life: inheritance. It is through this mechanism that variations among individuals can cumulate and feed natural selection. Here you can find out why humans have different skin colors, hair types, even different susceptibility to particular diseases or to digesting non-human milk. How fascinating is it to realize that all these differences reveal different adaptations along the evolutionary journey of human populations? Did you know that some European hunter-gatherers were still dark-skinned 7,000 years ago?

Now, have a look at this luminous wall map: it shows maps of the world over the past 150,000 years. There are different ways to query this interactive map: you can focus on particular regions to see what was going on during warm or dry periods. You can watch the Sahara Desert retracting and expanding, or you can let the map play automatically to show you possible “corridors” of early waves of humans out of Africa, towards the Sinai and the Mediterranean, and introduce you to the “southern dispersal route” - the migration events associated to the peopling of South Asia and Northern Australia 65,000 years ago. This map will show you how these dispersals happened when sea levels were lower and lands like New Guinea and Australia were bridged. It is the last Ice Age, the Late Pleistocene, when periods of glaciation at high latitudes affected climate and sea levels globally. The animation shows you the peopling of the whole world and its relative chronology. Did you know that the Americas are the very last continent to be colonized by humans only between 20,000 and 10,000 years ago? Humans are by then



carrying sophisticated spears and implements to the point of being a serious menace for an already endangered megafauna, threatened by drastic climate change.

The story of the peopling of Eurasia is fascinating too. When your African ancestors reached West Eurasia around 45,000 years ago, they found other humans well adapted to the cold temperatures of the ice age: the Neanderthals. This is a story that deserves its own exhibit: who were the Neanderthals? Were they African too? How different were they from your ancestors? How do we know? Where are they found? Is it true that there is Neanderthals' DNA in living people? The genetic and fossil evidence is revealing more regional variation of hominins in Eurasia besides the Neanderthals, some of whom are interesting relics of the earliest migrations out of Africa by *Homo erectus* like *Homo georgicus* and *luzonensis*. And what about "the hobbit"?

There is an exhibit dedicated to ongoing research and new finds. Fossil hunters and scientists continuously discover new evidence that might add or revise some of the information that you have been learning thus far. This is how science works. There are monitors that at particular times of the day are connected live with scientists working in the field, or fossil preparators at the Turkana Basin Institute. You can ask them questions and have a taste of what it means to be a scientist, a discoverer, a professional in science.

Size: 1,400 m²

Type of gallery: Hands-on; body-on; social-on.

Holding power: 20 minutes.

Icon: The family photo wall.

Must-sees: Pepper's ghost mirroring visitors' faces on modern human skulls of different ages.

Collection wish list:

- Replicas of *Homo sapiens* skulls of different ages and sex.
- The most complete collection of real size models and replicas of fossil specimens of early *Homo sapiens* (Jebel Irhoud, Morocco, 315,000 y; Florisbad, South Africa, 260,000 y; Omo Kibish 1, Ethiopia, 195,000 y; Misliya Cave, Israel, 180,000 y; Herto, Ethiopia, 160,000 y; Qafzeh, Israel, 120,000 y) and contemporary hominin species – *Homo heidelbergensis*, *Homo naledi*, *Homo neanderthalensis*, *Homo floresiensis*, *Homo luzonensis*, Chinese specimens. List to be compiled carefully after making final decisions about exhibits.

Experience your **humanness** through games.



Evolutionary game room

Objective: To make visitors experience how cooperative they are by nature and sense their connection with biodiversity.

Learning outcome: By cooperating and using our brains we can change our behavior for the better.

Key-message: We need each other.

You have seen how much you and all life are so dependent on the environment and from each other. We are all interconnected, wired in the web of life in a way that we can not do without other animals, plants, and each other. Human hyper-sociality is a strength, a beautiful product of evolution, a plus when speaking of adaptation: together we have been able to form communities looking after each other, developing reciprocity to strengthen useful bonds, enlarging networks, spreading beyond our biological limits. There is lots of evidence that shows that people are altruistic, regardless of rewards or punishments. People give blood, give to charity, risk their lives to save others - and often anonymously. Psychologists and economists have been studying altruism through experiments that you can participate in at Ngaren, and directly test one of the characters that have co-evolved with your genes, enabling the worldwide success of humans as a species.

Some evolutionary game-theory games have been designed for a museum audience. There will be games for individuals and groups. Some of the games that are played here will also be sold at the museum shop, to continue the Ngaren experience back home.

Play these games to see how cooperative you are by nature, and to experience your connection with all biodiversity. There are pinballs, slot machines, video games, board games, and escape rooms, all designed to make you interact in a fun way with your human nature. Play it and you may discover things about yourself that you didn't know.

There are also games about evolution in general. By playing with them, you will learn the principles of evolution and how an ecosystem is built. There is a game to make you experience what it means to be a fish in a changing ocean, with rising temperature, acidification, and plastic becoming part of the plankton. Or a pollinator in a chemically poisoned field of crops. You will experience compassion and empathy for the natural world and perceive the "human risk" in a fictional, nevertheless effective way.

After the game room, you feel energized and have discovered new things about yourself. You realize your species is inventive, creative and smart, and that your peers are all human beings worldwide! If we combine forces, we can really change the world, our world. A world worth being treasured.

Size: 600 m²

Type of gallery: Hands-on.

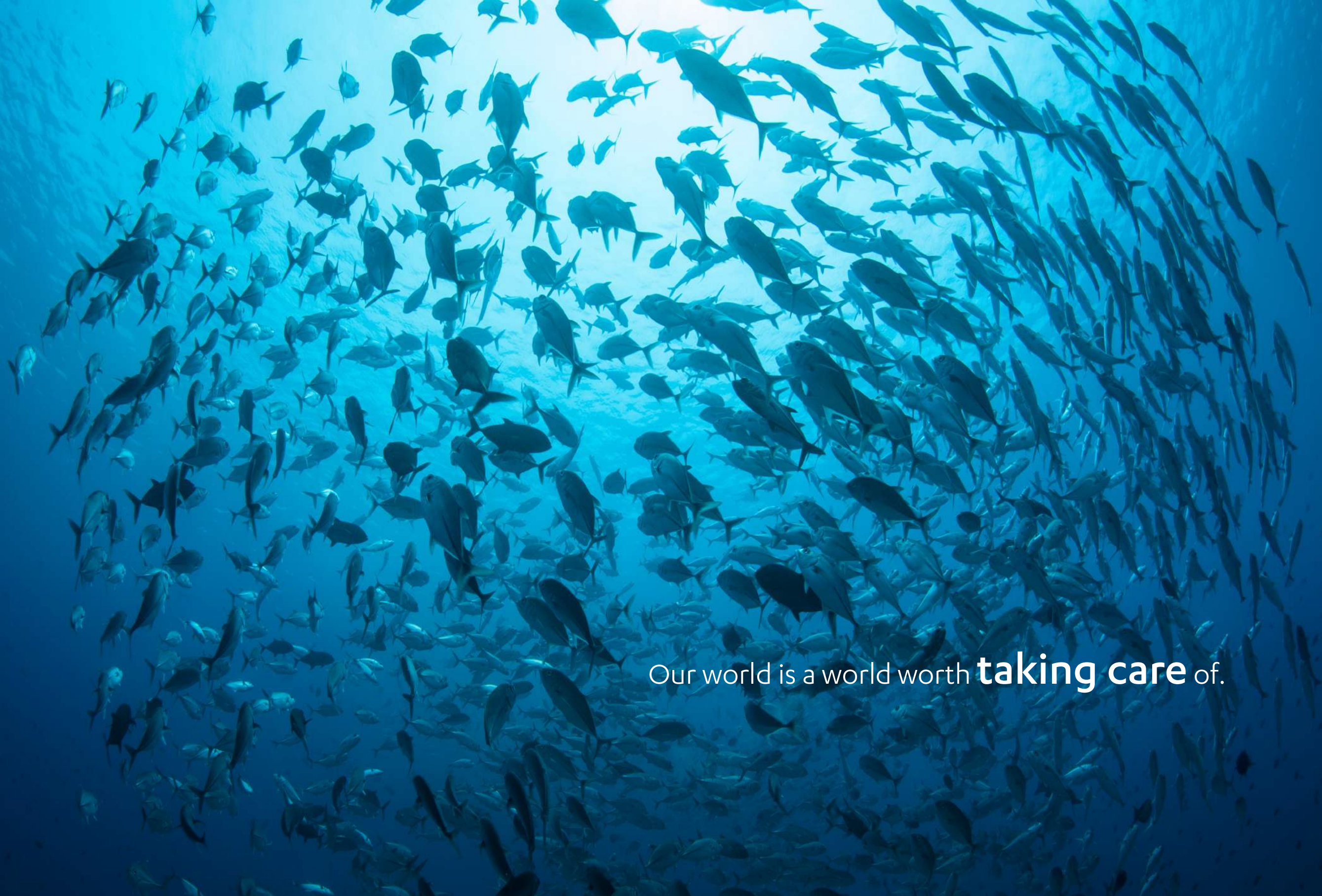
Holding power: 20 to 30 minutes.

Icon: Jenga! game.

A low-angle shot of an orangutan climbing a tree trunk in a lush green forest. The orangutan has thick, reddish-brown fur and is looking directly at the camera with a calm expression. Its hands and feet are gripping the bark of the tree. The background is filled with dense green foliage and other tree trunks, creating a sense of being deep within a jungle.

Your peers are **all humans** worldwide!

If we combine forces, we can really **change** the world, **our world**.



Our world is a world worth **taking care** of.

Treasure rooms

Ngaren's treasure rooms are a hymn to the beauty and importance of biodiversity, expressed through the richness in species and habitat diversity, along with the very human cultural diversity worldwide. You are going to end your visit to Ngaren with a series of immersive galleries with audio and visual exhibits. You will feel moved, inspired, and empowered to take care of nature and each other. In the first gallery, you will experience the sounds of nature, recorded by naturalists from different habitats worldwide. In the following gallery, you will be immersed in the cultural diversity of people worldwide, including experiencing their linguistic diversity. Finally, you will meet inspirational people that are leading scientific research and developing new ideas for sustainable living.

A large, abstract graphic of blue, overlapping wave-like lines that create a sense of movement and depth, set against a dark blue background.

Appreciate nature with all your senses.



Symphony room

Close your eyes and relax. Enjoy the sounds of nature and smell some of its fragrances. A soundscape brings you to different habitats: grasslands, mountains, deserts, temperate and tropical rainforests, oceans, and freshwaters. Each habitat vibrates of an orchestra of animals and plants, but also of storms and breeze, streams and waterfalls. There are sounds of insects, reptiles, amphibians, birds, and mammals. And those of fish, whales and sea anemones. Sounds of a healthy habitat. Listen to what happens when humans interfere.

For an idea of the type of experience, see Bernie Krause's website:
<https://www.legrandorchestredesanimaux.com/en>



Value **our** human **cultural diversity**.



Homage to humanity

Today we are the only humans alive. We have become ubiquitous, we live everywhere and through adaptations to different environments, we have evolved different physical and cultural traits. This is an immense treasure to look after: what makes us interesting is our diversity, expressed through a variety of languages, behaviors, and cultures. Ornaments are beautiful implements of cultural expression and are largely found in the past record too. One of their earliest pieces of evidence is the use of shells as beads in Morocco and South Africa about 80,000 years ago. Did you know that the oldest evidence of ostrich eggshell beads is dated 40,000 years ago and is found in Kenya? They are used as proxies of age, marital and social status, and to mark belonging to one group. Ostrich eggshell beads have been widely used by African hunter-gatherers and pastoralists until quite recently. In this room, you can enjoy displays of ornaments both recent and archaeological from all continents. The walls are filled with images of cultures from all over the world, most of whom are endangered.

For an idea of the type of images, see
<https://www.jimmynelson.com>
<https://stichtinglily.nl/foto-archief/>
<https://www.africanceremonies.com>



You feel **inspired**
and empowered to **support** the future
of your **family** and **planet**.

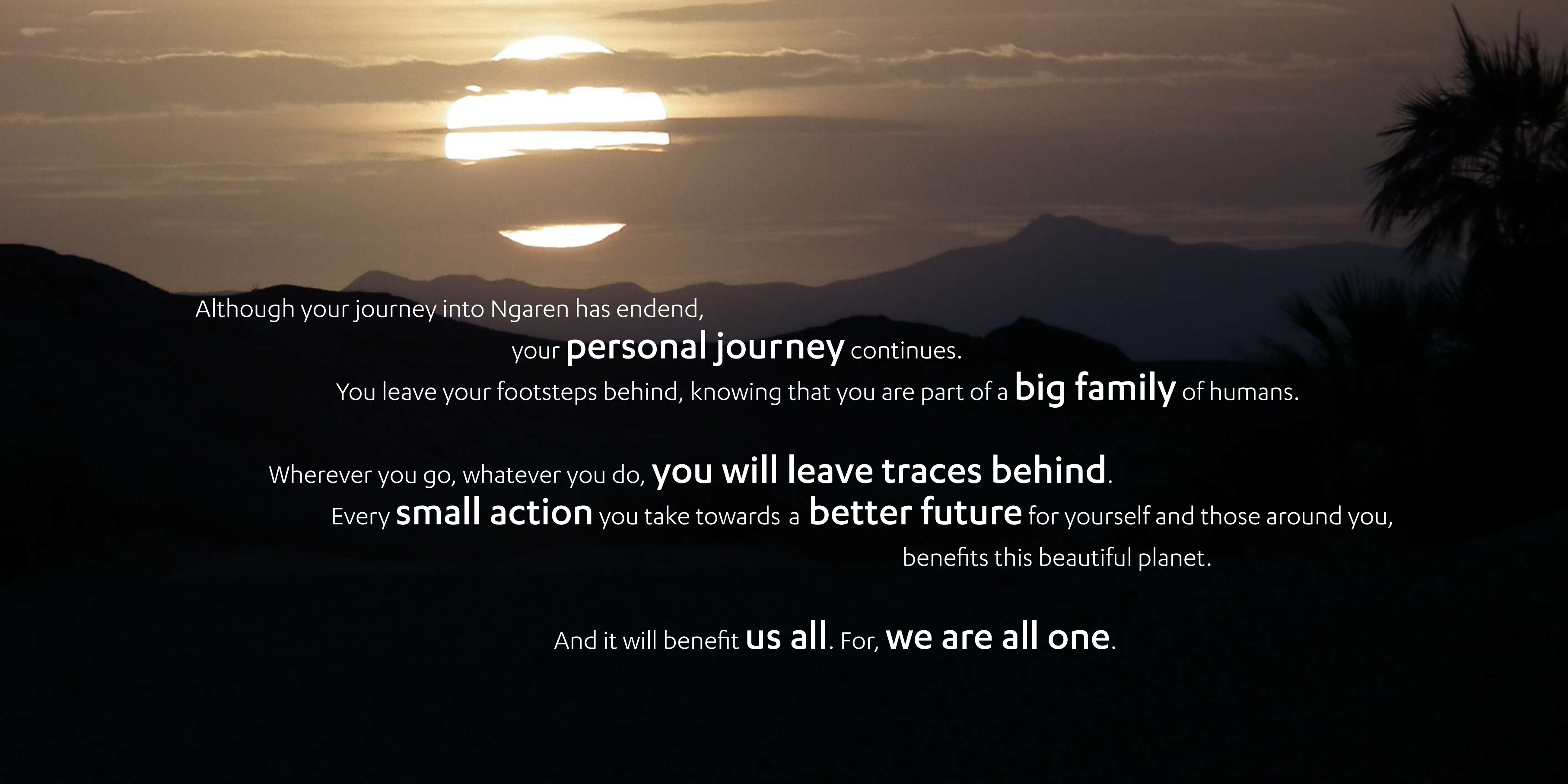


A treasure trove of ideas and great minds

This last room is there for you to be inspired by great ideas to change the world. Some of them are already ongoing projects, others are just ideas that need implementation through science, technology, and creativity to become real. There are people, NGOs, nations presenting ideas about food security, sustainable energy, human rights, education, and scientific research.

You will also meet Richard Leakey, founder of Ngaren, who will talk to you about his dreams and impact in the field of conservation and human evolution.

This room will be a mixture of video stations and exhibits to stimulate your curiosity about subjects that interest you the most. Also, you will find Ngaren staff there to talk and receive your questions or commitments to continue to treasure the world and all humanity.



Although your journey into Ngaren has ended,

your **personal journey** continues.


You leave your footsteps behind, knowing that you are part of a **big family** of humans.

Wherever you go, whatever you do, **you will leave traces behind.**

Every **small action** you take towards a **better future** for yourself and those around you,
benefits this beautiful planet.

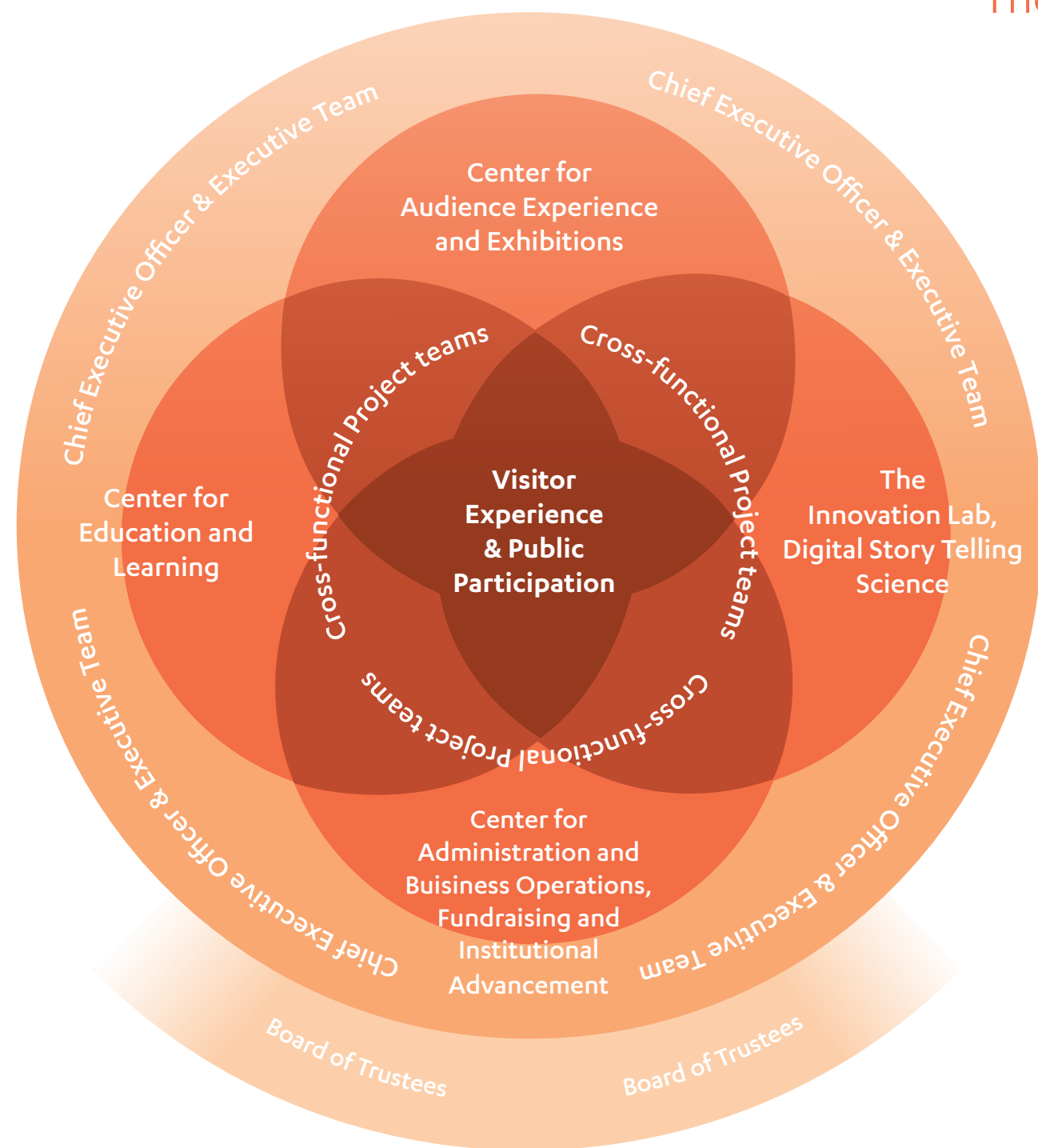
And it will benefit **us all**. For, **we are all one.**

We are one people.



THE ENGINE

The structure of Ngaren is designed so that its mission is the engine
– the **driving force** that will propel the institution forward.



Nagren’s organizational structure

The organizational and management structure of any institution is important. However, for a mission driven institution such as Ngaren, it is critical. The structure is being designed to ignite innovation and ensure that the institution stays true to its core values. In addition, it is critical that Ngaren be developed in a way that anticipates not only the challenges and obstacles that any new organization might face as it develops, but also attempts to predict any specific challenges that Ngaren may encounter due to the location, uniqueness, and nature of its mission.

Ngaren’s vision is to create a unique, one-of-a-kind museum experience – one that is participatory, customized, and social.

Therefore, the organizational structure of Ngaren is visitor-focused, placing the audience and participatory experience at the center of the institution. The quality and integration of the constituent parts of Ngaren will be critical for the development of a well-functioning institution. The main proposed structure for the Ngaren museum is to establish four divisions or “centers” that will work together – all prioritizing visitors’ experience and participation as the center of the structure.

Organizational structure core values

Science and Innovation as an Engine. By creating an “innovation lab” at the department level that clusters scientific expertise, innovation, digital technology, and fresh thinking together, Ngaren will be able to institutionalize its core values. This department will be the engine for implementing new ideas and projects, refining goals, keeping focused on the mission, staying ahead of the curve and achieving better outcomes. The Innovation Lab will be responsible for maintaining the scientific integrity of the content of Ngaren and establishing and maintaining relationships with academic institutions, digital and special effects experts and cutting-edge technological development.

Customer Focus and Public Participation. Ngaren places the experience of visitors and public participation at the very center of its mission, values, and organizational structure. The fundamental concept for Ngaren is to create transformative experiences that have real meaning in the lives of visitors. By creating personal relevance for visitors to these experiences, Ngaren will be able to continue to attract audiences and educate visitors. This includes prioritizing the customer’s desire to see scientific, interesting, informative, educative and entertaining exhibitions, and to come away with accurate information and knowledge. But it also means creating a transparent, open and learning environment that encourages participation and critical thinking. By placing the visitor experience and public participation at the center of the organizational structure, Ngaren will ensure that the institution is driven by audience engagement and experience.

Brand Recognition and Institutional Advancement. Ngaren’s vision is to become a global brand recognized and respected in the world of paleo-anthropology, museum experience, digital technology, education, innovation and immersive experiential education. The structure of the organization reflects these priorities and prioritizes institutional learning and growth. Ngaren will need to continue to develop revenue streams and attract investment/donations to achieve this goal, and be able to continuously transform itself and grow and evolve with the changing times and changing science and technology. As Ngaren builds its brand and awareness into a global institution, the proposed organizational structure will ensure it remains relevant and cutting edge.

Education and Learning. A fundamental goal of Ngaren is to catalyze global and local dialogue on urgent and compelling issues, and inspire action grounded in an understanding of our history, human origins, and our shared heritage. The proposed structure seeks to ensure that this goal is prioritized in all the functions of the museum and that science, education, and learning remains a driving force compelling the institution forward.



The Innovation Lab is the “wow”engine of Ngaren.

The Innovation Lab

This area of Ngaren is responsible for finding and advancing breakthrough scientific discoveries that can be showcased in exhibits and imagining how the science can be translated into stories and experiences for the visitors and users of online content.

The Innovation Lab is responsible for working with the exhibit and education team to bring new discoveries and ideas to life as exhibits and online content. The Innovation Lab will be responsible for generating ideas, and testing and launching new ways of communicating science. It will be responsible for partnering with designers, academic researchers, strategists, and scientists together with external partners from academia, the private and non-profit sectors and government.

This will be the center for scientific staff and scientific integrity, as well as science story-telling and strategy. In addition to on-site content, responsibility for the development of online content will also be housed in the Innovation Lab. Information and the distribution of information is at the heart of the mission of Ngaren. Digital technicians in the Innovation Lab area will be dedicated to bringing science to life – and the department will include digital artists, animators, storytellers and special effects specialists as well as scientists, all working to create groundbreaking immersive and compelling exhibits and stories about who we are as a species and how we came to be.

This center will take over
the responsibility for **content** and **exhibitions** from the Innovation Lab
once exhibits have been created.



The Center for Exhibition and Visitor Management

Ngaren's goal is to be a world-class visitor attraction to which the general public can come to learn about the evolution of humankind, experience immersive exhibits, and get a glimpse into the past, present, and future of our planet. Ngaren's vision is to become a cultural icon in Kenya and Africa. **Maintaining a world class museum focused on visitor experience and public participation** is therefore paramount to the success of the institution.

The Center for Exhibition and Visitor Management is responsible for visitor attraction functions (the galleries, planetarium, and special exhibitions), and oversight of digital content and will be tasked with maintaining the highest quality visitor/user experience. It will manage exhibitions, and work with the center for education and learning to implement the educational programs, and all related products, such as web projects, on-line lessons, etc.

This Center is responsible for the content and product of Ngaren as seen and experienced by the public and will be responsible for the day-to-day operations of the museum. This responsibility includes the exhibitions themselves (both the permanent and the temporary ones), the reception of the public, the visitor support, demonstrations, maintaining on-line and digital exhibitions and information, accompanying printed matter, and other external collateral.



The vision is for Ngaren to become
a **hub of learning** and a respected and
sought out institution for graduate students,
internships and academic fellowships
in a new museology.

The Center for Education and Learning

At the core of Ngaren's mission is the ambition that Ngaren be a driving force igniting innovation and inspiring discussion of critical social issues. The Center for Education and Learning will be responsible creating and developing the pedagogy for educational offerings, and overseeing the development of educational program content for Ngaren products. This center will be responsible for creating and deepening the museum experiences through a wide variety of platforms and venues – on-line and in the community, outreach with academic institutions etc.

Staff in this area will work with the Innovation Lab and the Center for Exhibit and Visitor Management to incorporate educational components throughout exhibitions, collections, public programs, publications, and enterprise activities. It will be responsible for catalyzing dialogue on urgent and compelling issues, inspiring action grounded in an understanding of our history and human origins and our shared heritage. It will work to activate the entire museum space and offerings for learning, socializing, reflection and community exchange. The staff in this department will work with communications and business development to form partnerships with school and academic institutions to co-brand materials, curriculum and content for distribution/use globally.



This is the critical “**operations division**” of the organization
– the nuts and bolts of non-programmatic functions.

The Center for Administration, Business Operations, Fundraising and Institutional Advancement

This Center serves both the internal organization and external stakeholders of Ngaren and, because of the importance of these functions to the success of the institution, it is recommended that this unit be led by the Chief Executive Officer (CEO).

The CEO will be appointed by the Board of Directors to lead the organization but also functions, in this capacity, as a division director for the Center for Administration and Business Operations.

This Center oversees three main functions: Fundraising and Institutional Advancement, Administration and Operations.

Under these three divisions fall responsibility for:

- Communication and Events, Fundraising, and Business Development (under Fundraising and Institutional Advancement);
- Human Resources, Financial Affairs, Legal (Administration), Board Relations and Advisory Committees (under Administration);
- Technology/Help Desk, Building Maintenance/Facilities, Building Management, Security, Restaurant and Café Management, Museum Shop Management (Under Operations)



Ngaren will develop **unparalleled opportunities** for locals to learn and train in museology, content creation, and science storytelling.

The Ngaren Academy

One of the goals of Ngaren is to reduce inequalities in Africa, providing for decent work, economic growth and gender equality accessible to Kenyan and African citizens. In order to do this, Ngaren will establish itself as a hub of learning, and a respected and sought out institution for graduate students, internships, and academic fellowships in museology, science storytelling and digital content creation. Our intention is to develop unparalleled opportunities for local staff to learn a variety of skills and knowledge needed to work in a new museum environment. Ngaren will partner with African universities, international academic institutions and museums, and activate the entire museum space for learning and education. Interns and fellows from Kenya and elsewhere in Africa will be trained and work side by side with the Education and Learning Center teams and staff in the Innovation Lab, as part of a dynamic academy that prioritizes a student-focused leadership curriculum that develops world-class skills, intellect and innovation. The academy will offer exposure to science, global issues and encourage dialogue, problem solving and entrepreneurship that fits with the vision of Ngaren as a groundbreaking institution.

The training of new professionals and volunteers

Ngaren has a social responsibility to reach out to the wider community. By offering opportunities to those who want to participate in the Ngaren vision without being able to engage in formal employment (for reasons of age, education, background, personal circumstances, etc.) or to those who are enthusiastic about the goals of Ngaren and want to be part of the organization, even without seeking formal employment, Ngaren can extend its influence and widen its impact. Volunteers will fall under the Center for Experience and Exhibitions.

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