

|Interspectral|™

Inside Explorer™ 2.0

2023

Making the inside visible - An intuitive and interactive
3D learning experience

www.interspectral.com



Table of contents

INSIDE EXPLORER 2.0

CAPTURING REALITY

CONTENT PARTNERS

OUR CUSTOMERS

CUSTOM SERVICES

3D CONTENT LIBRARY

Space Explorers **(NEW!)**

Fire and Ice: The History of Earth **(NEW!)**

Dig Deeper - Monstrous Creatures of The Sea

The Corona Exhibition 2.0

Ben body Human Anatomy

Human Anatomy

Human Anatomy 3D Printing and Implants

Animal Anatomy

Sharks & Rays

Meteorites

Fossilized Insects in Amber

Insects

Egyptian Mummy - Neswau

Mummies by the Field Museum

HARDWARE REQUIREMENTS

Inside Explorer 2.0

MAKING THE INSIDE VISIBLE - AN INTUITIVE AND INTERACTIVE 3D LEARNING EXPERIENCE

Inside Explorer is an interactive experience that enables users to explore objects that have been scanned with 3D x-ray. Using touch gestures users can examine complex data in an intuitive and exciting way. Unlike many other exhibits Inside Explorer is using unique authentic scientific data.

Inside Explorer is used worldwide to create educational experiences allowing users to learn about a wide variety of subjects including human anatomy, mummies and Martian meteorites.

Inside Explorer can be supplied as a complete turnkey solution including hardware, software and pre-installed content packages with 3D scans.

The table can also be used to present your own research and collections in a gallery setting and thereby put the research in the hands of the visitors.

FEATURES:

- › Based on leading Swedish research and technology
- › Variety of content and applications
- › Easy to use
- › Robust and stable
- › State-of-the-art visualization
- › Multilingual support
- › Display multiple content on the same screen

SUITABLE FOR:

- › History museums and cultural heritage
- › Natural history museums
- › Science and technology centers
- › Animal parks and aquariums
- › Education and training
- › Imaging and research labs

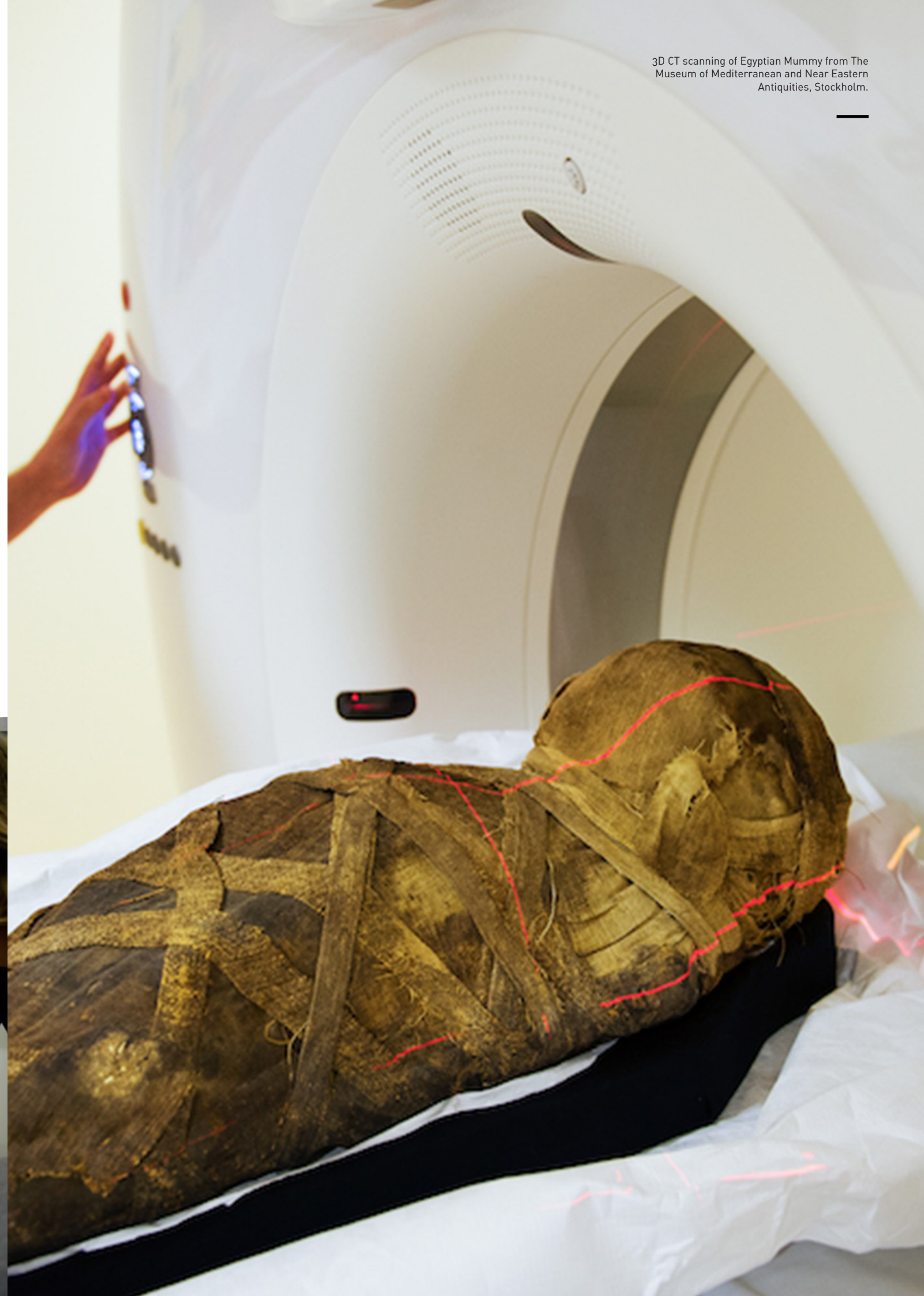
DESIGNED FOR UNATTENDED
PUBLIC ENVIRONMENTS

Capturing Reality

Interspectral's content is all based on complex authentic and scientific 3D data captured with state-of-the-art technologies in collaboration with leading partners world-wide.

With help of state-of-the-art technologies such as 3D Computed Tomography (CT), MRI, Laser Scanning and Photogrammetry we create virtual 3D copies of everything from small insects to the human body.

With help of Inside Explorer our users can explore the data in an easy way creating an intuitive and interactive 3D learning experience. In this catalogue you can learn more about the ever expanding content library of Interspectral.



3D CT scanning of Egyptian Mummy from The Museum of Mediterranean and Near Eastern Antiquities, Stockholm.

Content Partners

Interspectral works with leading researchers, museums, collections and other organisations world wide to create an unique extensive library featuring high quality 3D content spanning a wide variety of topics.

Through Inside Explorer our users can explore meteorites and fossils from The Field Museum, Chicago one of worlds finest natural history collections, the highest resolution 3D digital model yet made of a human brain and an Egyptian Mummy from Museums of World culture in Sweden.

The content library is ever-expanding and we add new partners continuously. This means you will always have access to new exciting real and authentic 3D data.



PROFESSOR GAVIN NAYLOR, UNIVERSITY OF FLORIDA

Professor Naylor studies the evolution of sharks and rays, and together with his partners has developed a database called "Chondrichthyes: Tree of Life", which allows users to explore the evolution of over 1,000 species of sharks and rays.



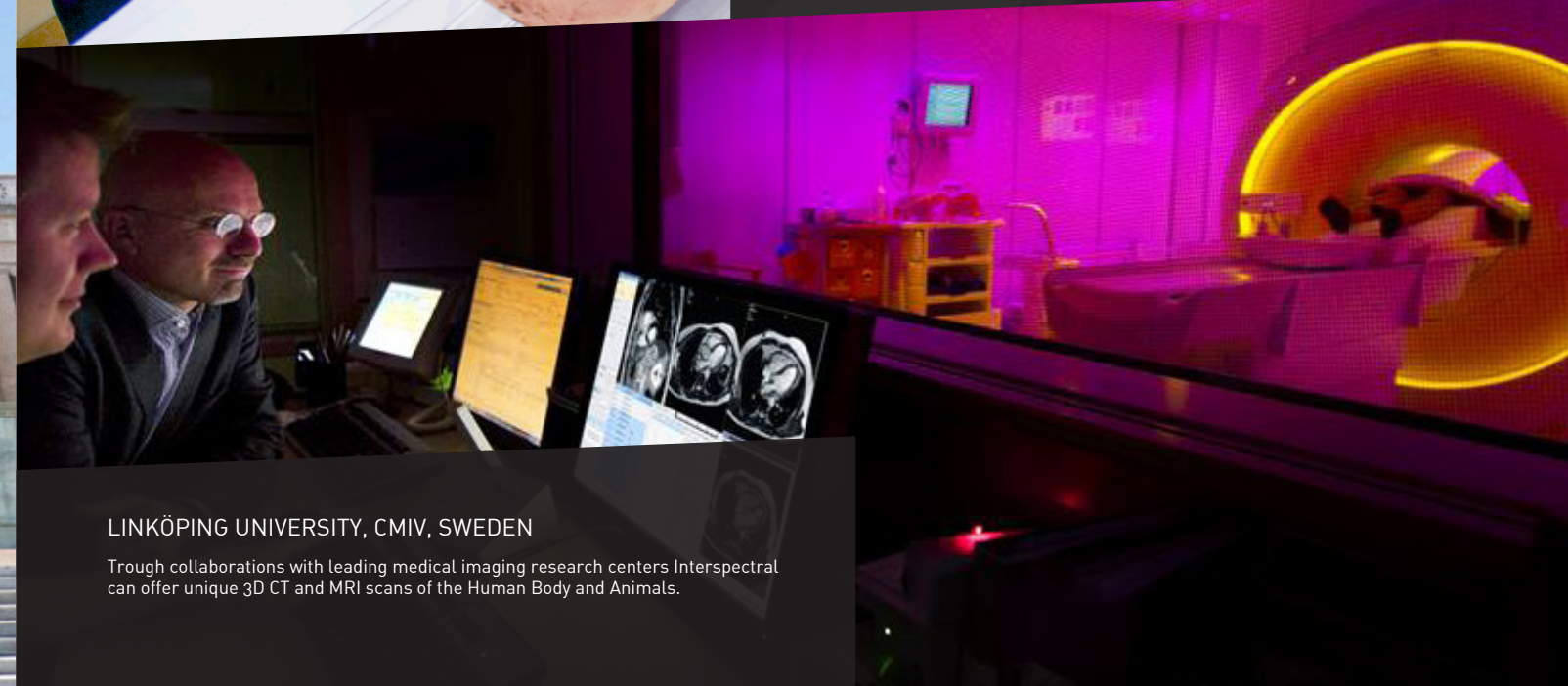
MUSEUM OF MEDITERRANEAN
AND NEAR EASTERN ANTIQUITIES, STOCKHOLM

Trough an exclusive collaboration with The Museum of Mediterranean and Near Eastern Antiquities in Stockholm Inside Explorer users can explore one of the best 3D digitised mummies in the world.



THE FIELD MUSEUM OF NATURAL HISTORY, CHICAGO

The Field Museum host one of the largest natural history collections in the world. The museum has a reputation for its high quality educational and scientific programmes, which makes it an ideal content partner for Interspectral.



LINKÖPING UNIVERSITY, CMIV, SWEDEN

Trough collaborations with leading medical imaging research centers Interspectral can offer unique 3D CT and MRI scans of the Human Body and Animals.

> 3D CONTENT LIBRARY

Inside Explorer can be supplied with pre-installed content based on unique 3D scans provided by Interspectral and leading research organisations. The ability to add new content will keep the touch table up to date for returning visitors and enable you to easily change the theme of the table.

HUMAN ANATOMY

Gross and regional scans (heart, brain, lungs etc). of the human body. Suitable for all levels of human anatomy education.

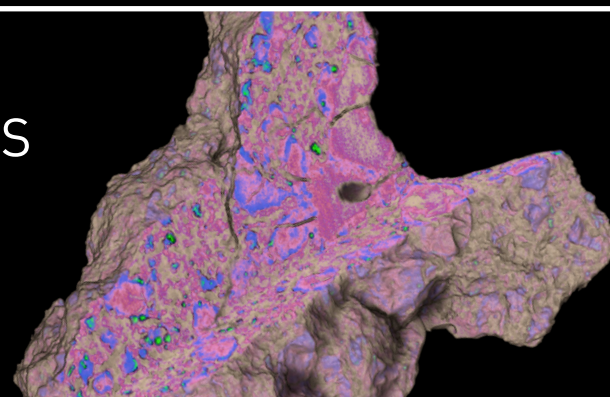


DIGITAL HERITAGE

Cultural history and art artefacts. Large collection of Egyptian mummies.

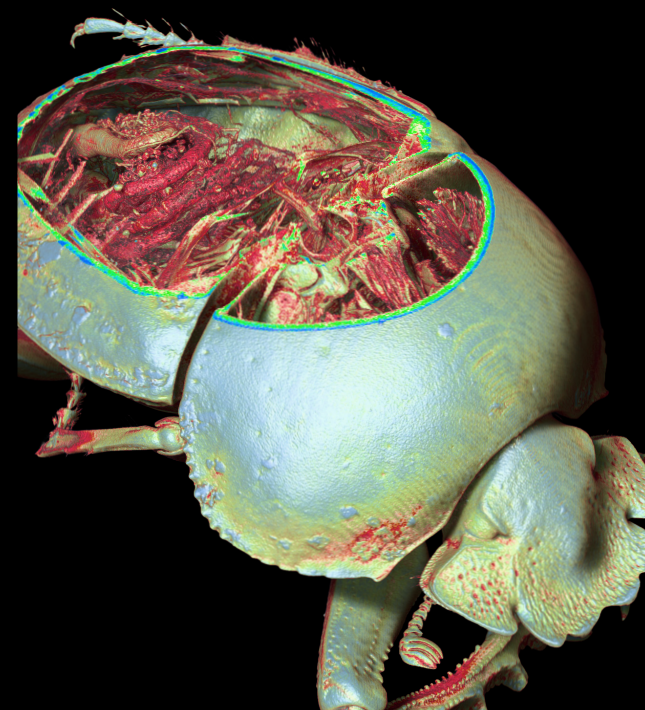
FOSSILS AND METEORITES

Fossilized animals and insects, meteorites, minerals and rocks



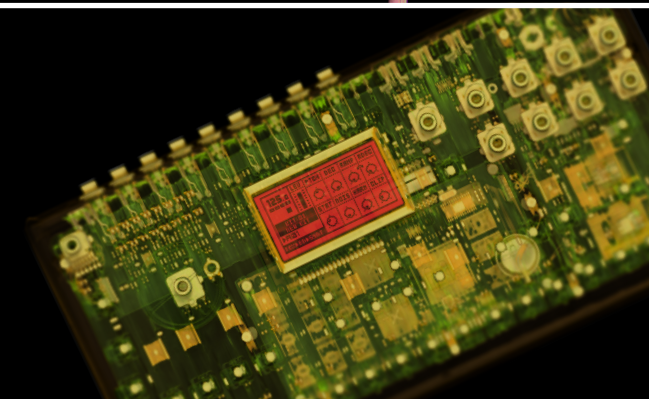
INSECTS AND PLANTS

Insects and plants including seeds, nuts, fruits and vegetables.



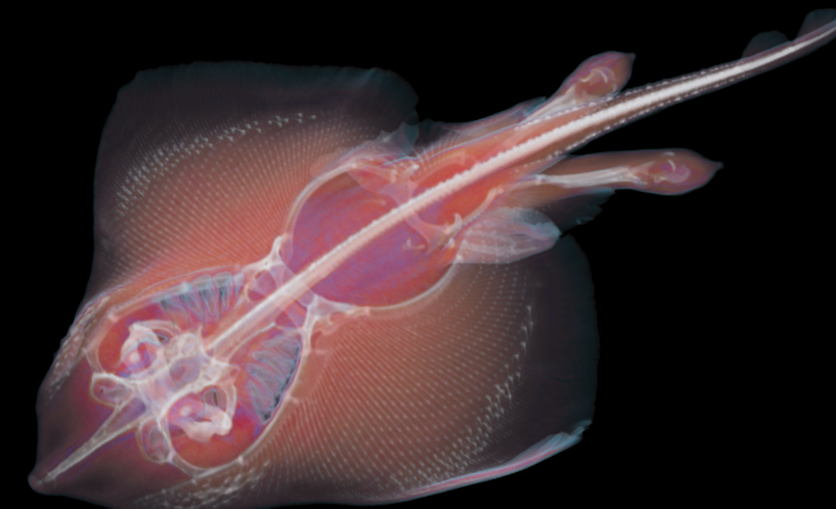
TECHNOLOGY

Technical artifacts, materials and everyday objects.



ANIMALS

Full body animal scans featuring a large number of species including land and marine mammals, birds and fish.



Our Customers

Inside Explorer can be found all over the world in educational organizations all aiming to create the best learning experience possible for their users.

We offer tailored solutions for museums, science and technology centers, aquariums and animal parks, schools and higher education institutions.

Our customers include leading institutions such as British Museum, London Natural History Museum, The Field Museum of Natural History, National Museum of Science + Industry, Rijksmuseum, Kew Garden, Nobel Museum, Swedish National Museum of Technology, Phillip and Patricia Frost Museum of Science and Science Centre Singapore.

> MUSEUMS

Virtual unwrap a mummy at Rijksmuseum Oudheden, Leiden, Netherlands.

> SCIENCE AND TECHNOLOGY CENTERS

Visitors to the Nobel Prize exhibition at Children's city in Dubai learn more about the different applications of X-ray, the first Nobel Prize in Physics.

> AQUARIUMS AND ANIMAL PARKS

Visitors to the new aquarium at Frost Science in Miami will be able to interactively explore 3D X-ray scans of the same sharks and rays that are swimming in the adjacent aquarium tanks to better appreciate their amazing physiology.

> SCHOOLS AND HIGHER EDUCATION

Inside Explorer running on touch device in class room session.

CUSTOM SERVICES

We can assist you in publishing and presenting your research and collections on Inside Explorer, therefore allowing the public access to behind the scenes research and stored collections. As new scans and discoveries are made you can make it immediately available to your visitors.

We have extensive experience in the field of 3D visualisation and digitisation. Together with our network of partners, we can offer you a wide range of services spanning from 3D scanning to custom development.

> THE DIGITALISATION PROCESS

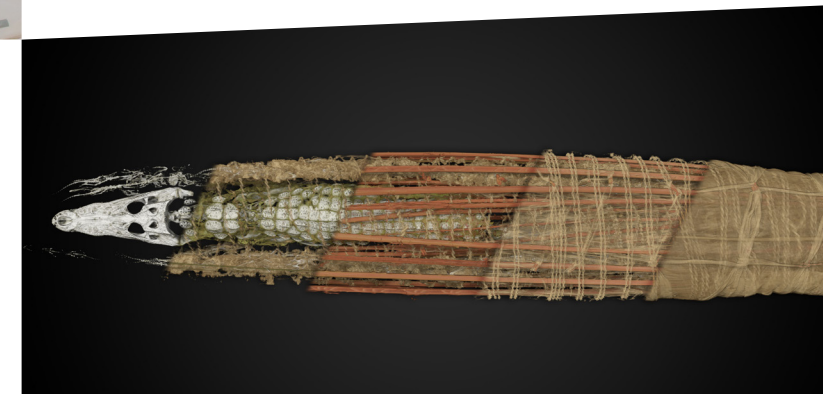
3D X-RAY SCANNING

Interspectral provides 3D volumetric scanning using technologies such as medical 3D CT and MRI and industrial 3D MicroCT. With volumetric scanning its possible to capture not only the exterior but the complete interior of an object.



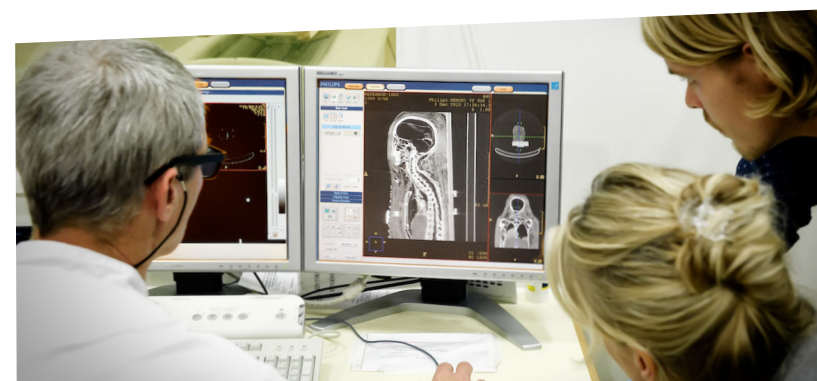
3D SURFACE SCANNING

We assist you to scan any small to medium sized object using the 3D surface scanning method suitable for your project. We have experience from working with technologies such as laser scanning, photogrammetry and handheld scanners.



3D DATA PROCESSING

Based on scans we capture or your existing 3D scans we can generate interactive 3D visualizations, animations, images and 3D prints.



EXPLORE AND ANALYZE THE DATA

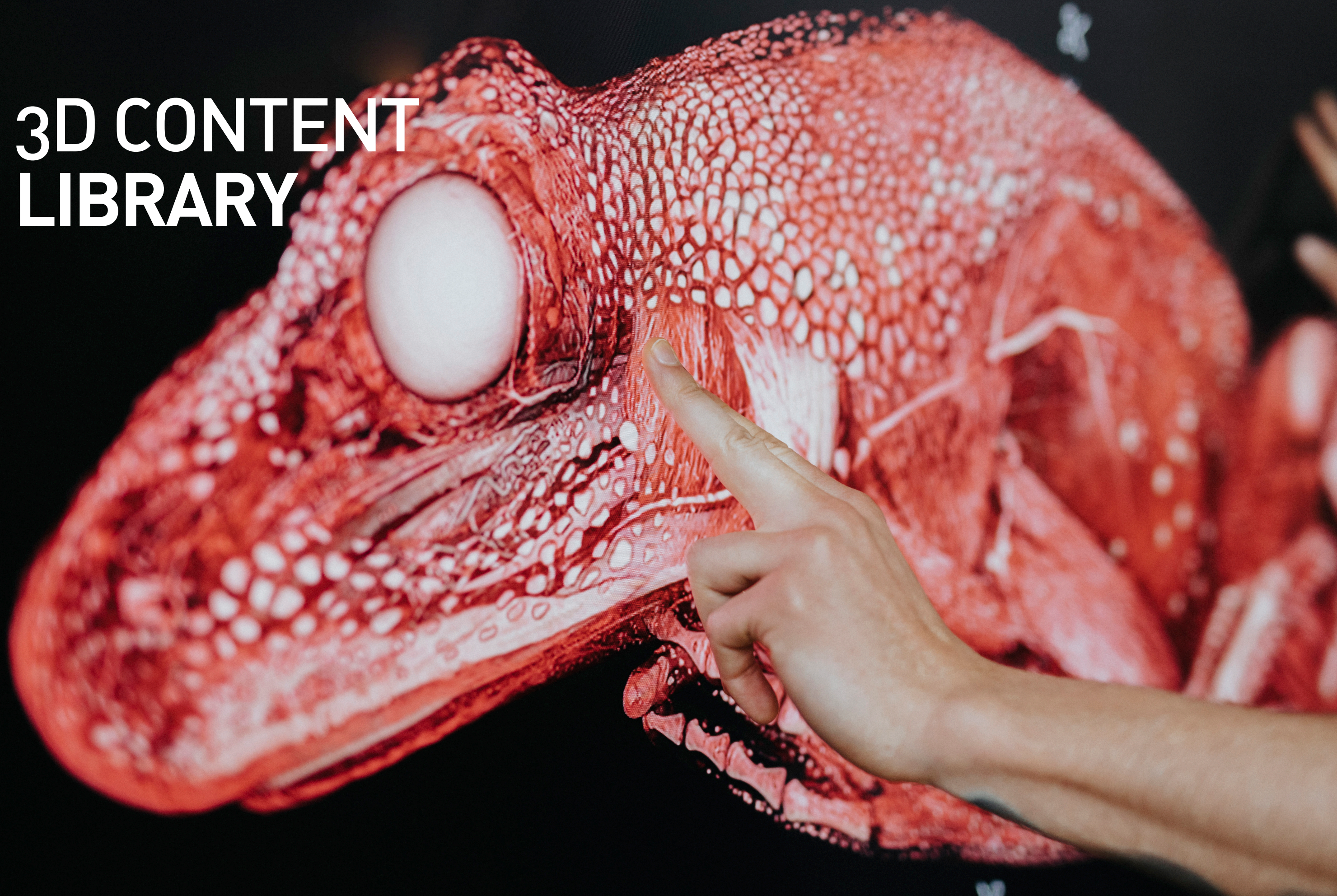
We can support your research and discovery process by providing leading expertise in radiology and scientific visualization. We also deliver powerful easy to use visualization tools and infrastructure.

CREATING THE INTERACTIVE EXPERIENCE

Based on your 3D scans and with help of Inside Explorer we create amazing interactive user experiences. We can generate interactive 3D-visualizations, animations, images, polygonal models and physical 3D-replicas using 3D-printing.



3D CONTENT LIBRARY



> SPECIAL CONTENT PACKAGE SPACE EXPLORERS

It isn't a stretch to think that humans have always looked up in the sky and wondered about the objects seen on a clear night. But we had to wait until the 20th century and the development of rockets, electronics, and other technologies before it became possible to send machines, animals, and humans into space.

Achieving spaceflight has enabled humans to explore our solar system and the rest of the universe and finally begin to understand the objects and phenomena above us. We call space exploration all these activities, discovery, scientific understanding, and using that to serve human purposes. This exhibit looks closer at how we discovered new things about our solar system and how that informed our scientific understanding of our solar system and beyond.

The exhibit contains 8 different scenes, one for each planet and spacecraft (+ pluto).

IN THIS EXHIBIT:

- › Explore the space probes that visited the planets in our solar system: Mariner, Messenger, Juno, Cassini, Voyager, New Horizons, and Maven.
- › Dive deep into the unique composition and features of Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto.
- › Learn how carefully designed equipment has shaped our understanding of other planets.

SPACE EXPLORERS

MARS & MAVEN

Mars was named by the ancient Romans for their god of war because its reddish color was reminiscent of blood. Other civilizations also named the planet for this attribute – for example, the Egyptians called it "Her Desher," meaning "the red one." Even today, it is frequently called the "Red Planet". Galileo Galilei first viewed the planet through a telescope in 1610.

JUPITER & JUNO

High above Jupiter's roiling clouds, three giant blades stretch out from a cylindrical, six-sided body. Some 20 meters wide, the Juno spacecraft is a dynamic engineering marvel, spinning to keep itself stable as it makes sweeping elliptical orbits around Jupiter. At their widest point, these elliptical orbits carry Juno far from the giant planet and its moons, keeping it mostly clear of heavy radiation regions. But every 53 days, Juno cuts within 5,000 kilometers of Jupiter's cloud tops.

SATURN & CASSINI

Saturn is the sixth planet from the Sun and the second-largest planet in our solar system. Like fellow gas giant Jupiter, Saturn is a massive ball made mostly of hydrogen and helium. Saturn is not the only planet with rings, but none are as spectacular or as complex as Saturn's. It is also the farthest planet from Earth discovered by the unaided human eye. Therefore Saturn has been known since ancient times. The planet is named for the Roman god of agriculture and wealth, who was also the father of Jupiter.

NEPTUNE & VOYAGER

Dark, cold, and whipped by supersonic winds, ice giant Neptune is the eighth and most distant planet in our solar system. More than 30 times as far from the Sun as Earth, Neptune is the only planet in our solar system not visible to the naked eye. In 2011 Neptune completed its first 165-year orbit since its discovery in 1846.



SPECIAL CONTENT PACKAGE

FIRE AND ICE - THE HISTORY OF EARTH

The earth is our home - our only home for the foreseeable future. It's where we get our soil, freshwater, metals, and minerals. It's where we get the energy to fuel our way of life. To be able to find these resources and utilize them sustainably we have to understand our planet - its past, present, and future. By studying rocks and fossils we add valuable chapters to the history of life on earth. We can also learn how and why the Earth's climate has changed over time which is crucial in understanding human-caused climate change. One will discover that this habitable planet that we call home has gone through both fire and ice.

When we recognize how human activities have changed the environment we might be able to avoid severe changes in the future. Lastly, we can use our knowledge of the history of Earth to better understand other planets in our solar system and more recently beyond it.

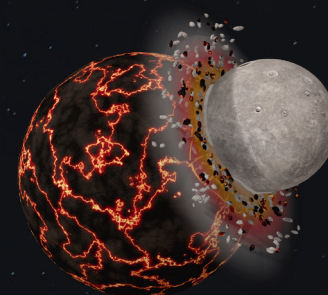
The exhibit contains 8 different scenes corresponding with the different geological eons of Earth's history (plus a volcano and a meteorite).

THE EXHIBIT WILL EXPLAIN:

- › The geological timeline of Earth
- › How the Earth and the moon were formed and evolved
- › How the oceans and continents were created and evolved
- › How our atmosphere was created
- › How volcanoes work.
- › How the global climate has changed over time and the impact on the planet

Fire & Ice

The history of Earth



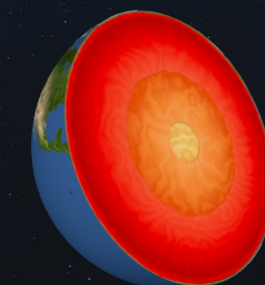
FORMATION OF THE MOON

There have been many different theories on how our moon was created. One of the aims of the Apollo program was to try to figure out which one that was right. The giant-impact hypothesis, suggests that the Moon formed from the debris of a collision between the proto-Earth and a Mars-sized planet, approximately 4.5 billion years ago, in the Hadean eon.



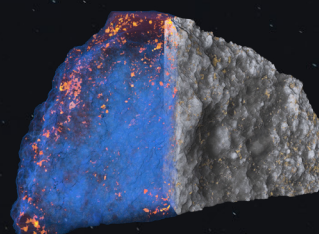
SNOWBALL EARTH

The Proterozoic is the longest eon of all, spanning from 2.5 billion to 541 million years ago and covers the time of free oxygen in the earth's atmosphere to just before the spread of complex life forms. Rocks from this eon can be found on all continents and are important sources of iron, gold, copper and uranium.



THE EARTH TODAY

Earth is the third planet from the Sun and the only astronomical object known to harbor life. While large amounts of water can be found throughout the Solar System, only Earth sustains liquid surface water. About 71% of Earth's surface is made up of the ocean, dwarfing Earth's polar ice, lakes and rivers. The remaining 29% of Earth's surface is land, consisting of continents and islands.



METEORITE BOTTEN 003

466 million years ago two large asteroids collided violently, sending meteorites raining down on Earth across the Earth. This one fell to the seafloor, where it was preserved as a fossil until it was uncovered in a quarry in Sweden in 2002.



SPECIAL CONTENT PACKAGE

DIG DEEPER - MONSTROUS CREATURES OF THE SEA

Dig Deeper: Monstrous Creatures of The Sea is an interactive digital excavation that takes us into the ground and beneath the waves to meet the marine creatures that inhabited the waters a hundred million years ago when the mighty dinosaurs ruled the land. Examine fossils found on the sea floor, and solve a 100-million-year-old underwater crime. Who and what killed the Eromgasaurus?

Let's help Dr. Scott Hocknull find fossils buried deep in the soil and explore a real dig site from Queensland, Australia brought to you by our Inside Explorer 3D technology. Imagine that the sliders are your shovel and dig away.

Dr. Hocknull is there to guide your visitors through the dig site and down to the very bones of two prehistorical sea monsters. With the help of fossils and 3D technology paleontologists of today can rebuild the face and bodies of extinct species and create 3d replicas of what these monstrous creatures might have looked like. Turns out Platypterygius has dorsal and tail fins just like sharks and dolphins of today.



PLATYPTERYGIUS – BROAD-FINNED ICHTHYOSAUR

Platypterygius was a dolphin-like marine reptile living in the Eromanga Sea in Australia during the Early Cretaceous. Platypterygius reached a length of about 7 metres. It had a long snout and a powerful finned tail.



EROMANGASAURUS – EROMANGA SEA ELASMOSAUR

Elasmosaurus was one of the largest plesiosaurs (marine reptiles), living during the late Cretaceous period. Elasmosaurus would have had a streamlined body with paddle-like limbs, a short tail, a small head, and an extremely long neck. The neck alone was over 7 meters long. Elasmosaurids were well adapted for aquatic life, and used their flippers for swimming.



DIG DEEPER
Monstrous Creatures of The Sea

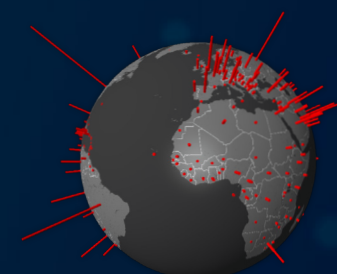
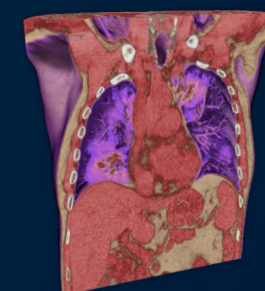
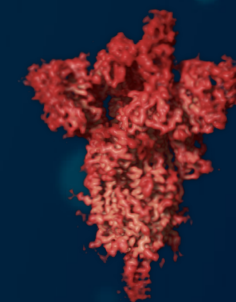
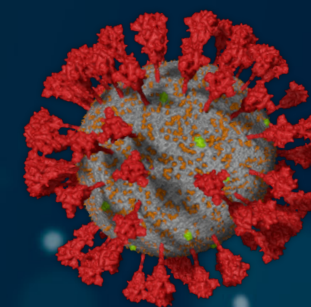
SPECIAL CONTENT PACKAGE

THE CORONA EXHIBITION

The COVID-19 pandemic has shown us, more than ever, the importance of science communication. The new Corona Exhibition in Inside Explorer will enable users to explore the SARS-CoV-2 virus and its effect on the human body, and our world. The exhibit is built on a collaboration with scientists and doctors, and it communicates real scientific research on the Coronavirus and COVID-19 using the power of visualization.

Embedded within each 3D dataset is a series of informational popups with detailed explanations and descriptions, making Inside Explorer a textbook coming alive. The combination of interactive visuals and texts creates a highly immersive learning experience that engages people of all ages. For the very youngest of children the colourful images and 3D visualizations spark fascination, and for the more mature audience, the exhibition gives a detailed narrative of the world changing pandemic.

Installing the ready-to-go Corona Exhibition at your science centre or public venue saves you both time and resources and most importantly, it empowers your visitors with knowledge.



SARS-COV-2 VIRUS

To unmask the virus and making it visible to our human eyes, visitors can cut into a SARS-CoV-2 virus particle and study its structure and viral properties. In a world where millions of people live under the threat of COVID-19 it is of vital importance to gain a better understanding of how the virus actually works, in search for a cure.

SPIKE PROTEIN

The SARS-CoV-2 spike proteins play a central role in infecting our human cells, and it is a target for both antibodies and vaccine designers. With this data set users can study a real Spike protein from the SARS-CoV-2 virus scanned using cutting edge CRYO Electron Microscope technology.

LUNGS

These CT scans from a pair of COVID-19 infected lungs allow visitors to experience what kind of visual and physical damage that the SARS-CoV-2 virus can do and what it looks like on the inside of our bodies. Therefor better understand the importance of keeping each other safe and help stop the spreading.

COVID-19 PANDEMIC

The users will be guided from the first confirmed case of COVID-19 reported in Wuhan, China in December 2019 through the world wide outbreak, tracking the first 12 months of the COVID-19 pandemic via an interactive 3D globe.

Statistics

Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' [Online Resource]

Credits

- SciLife Lab at The Karolinska Institute, Stockholm
- Visualiseringscenter and Linköping University, Sweden
- Nanographics, Vienna, Austria
- Dr. Lars Edling, Infectious Disease Specialist, Örebro Universitetssjukhus, Örebro, Sweden
- Norman Gellada, Imaging specialist, 3D and advanced visualization at Cedars-Sinai hospital in Los Angeles
- Dr. Altair Costa, Thoracic surgeon at the Federal University Hospital in São Paulo, Brazil
- Marie Larsson, PhD, Professor, Molecular Medicine and Virology, BKV, Linköping University



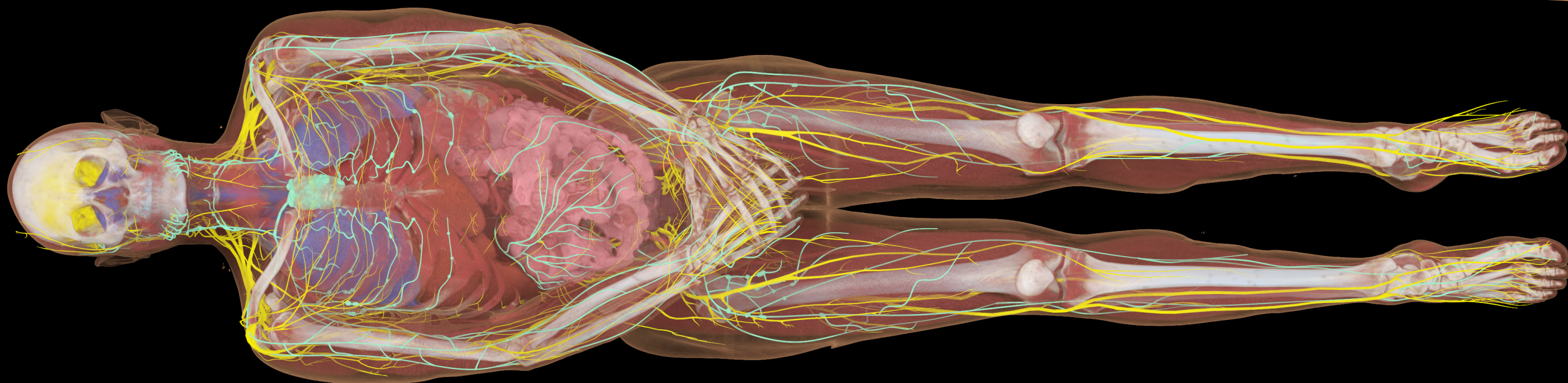
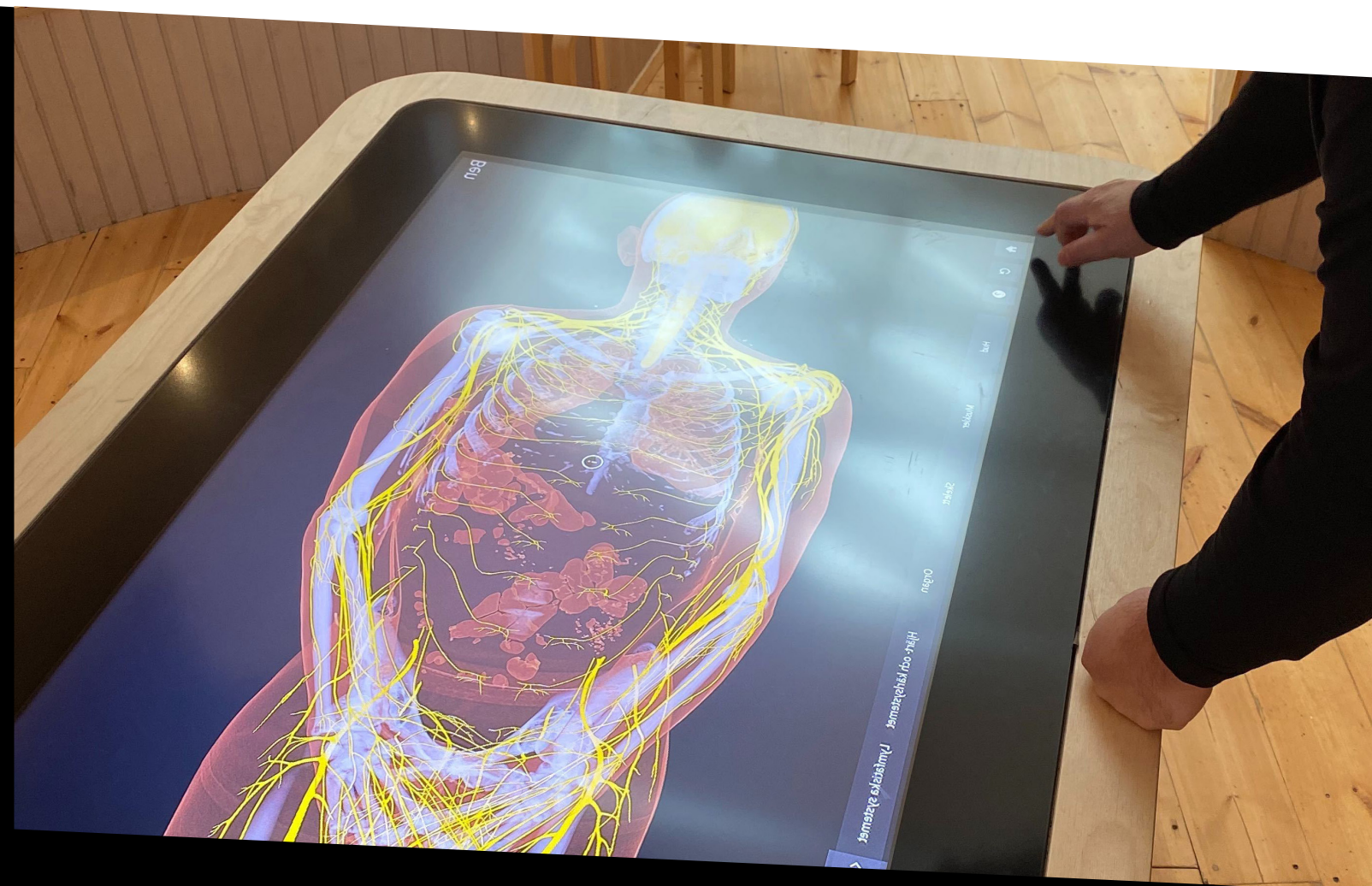
SPECIAL CONTENT PACKAGE

BEN BODY HUMAN ANATOMY

Ben Body is our most detailed human anatomy dataset produced in collaboration with Benjamin Moreno, CEO at IMA solutions. Thanks to a combination of real-captured data and anatomical representations in 3D, the inside of Ben offers a detailed and thorough visual experience of a healthy human body. The visualization and segmentation of the dataset took over a year to finalize and it comes preloaded with 34 informative annotations.

The data set is designed by scientists for a deeper learning experience through a great range of visualized data, like a realistically modelled lymphatic system and a complete nervous system. Ben comes equipped with a variety of organs and a vascular system made visible through the use of contrast fluid during scanning.

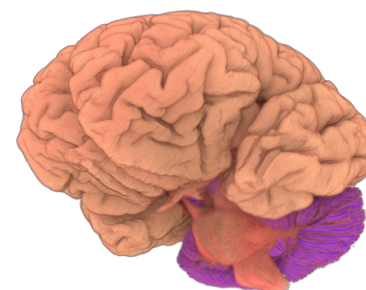
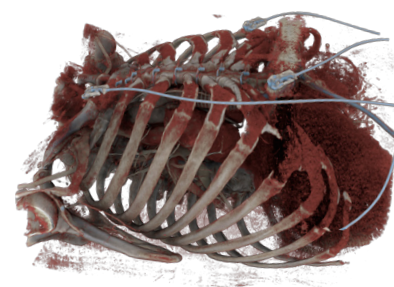
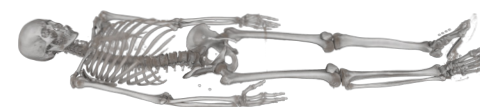
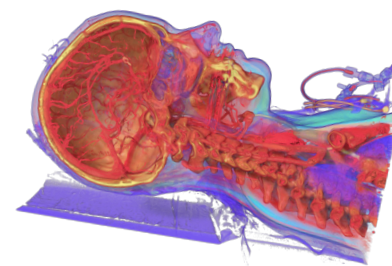
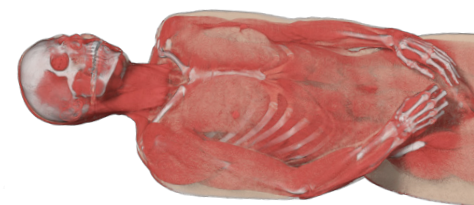
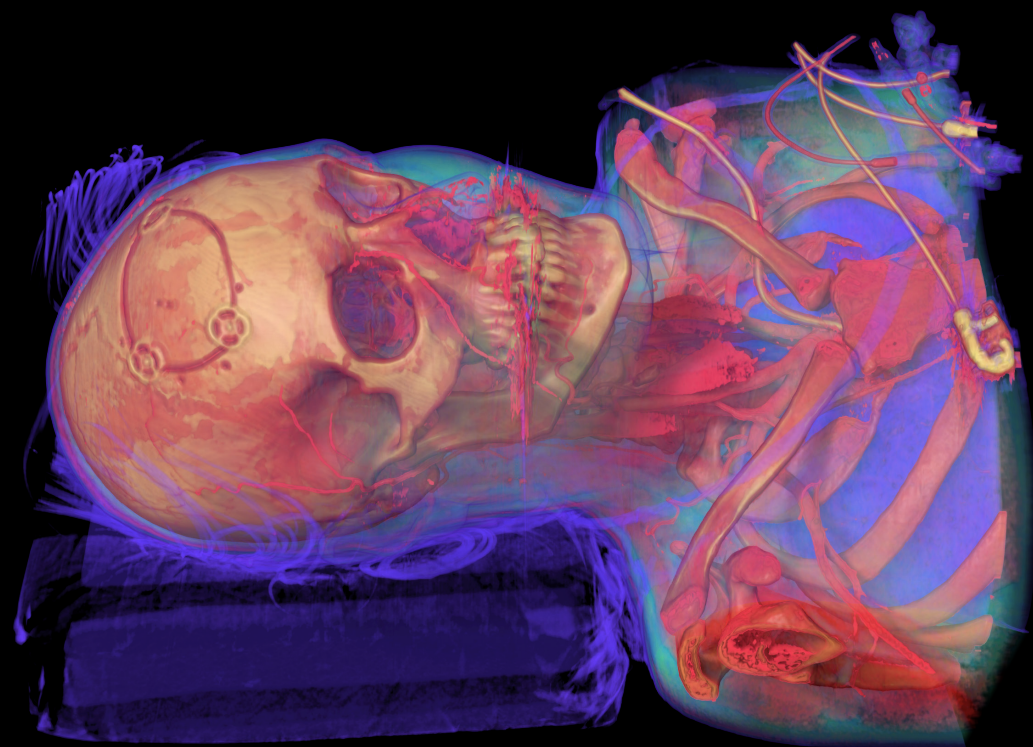
This special dataset can be used for exhibit purposes and educational classes to enrich the learning experience, allowing everybody to increase their understanding of the human body.



> STANDARD CONTENT PACKAGE HUMAN ANATOMY

The Human Anatomy Content package will provide the prerequisites for understanding the human anatomy and how it is affected by diseases, accidents and aging by exploring spectacular cases, unique for Inside Explorer.

For the first time, you will be able to examine a heart pump, different signs of aging, the implications of a severe traffic accident and explore the most detailed 3D representation of a human brain. This content package can be used for exhibit purposes and educational classes to enrich the learning experience, allowing everybody to increase their understanding of the human body.



FULL BODY SCAN - TRAFFIC ACCIDENT

A scan of a woman who died in a road accident. The examination provides a quick overview of the dead woman's anatomy and can reveal the cause of death—in this case, a broken neck. There are also a number of visible fractures to the jaw, on the right foot, left tibia and fibula, the right knee, several pelvic fractures and the left neck of the femur.

Data by
Linköping university,
Sweden

STROKE PATIENT

A CT scan of a living patient who has been treated for stroke. The patient has undergone surgery for a ruptured aneurysm in a small blood vessel in the brain using a procedure called "clipping", which simply put means the burst blood vessel is repaired using a small metal clip.

Data by
Linköping university,
Sweden

FULL BODY SCAN - AGING

Scan of a man in his fifties in physically good health. An example of natural ageing of the body is seen in the spine where the height between the first and second vertebra is reduced. You can also see calcification in the vertebrae, also a result of ageing.

Data by
Linköping university,
Sweden

ARTIFICIAL HEART PUMP

The heart pump fits neatly into a cavity below the heart next to the diaphragm. It connects to the left ventricle, where the blood leaves the heart. This particular type of pump is used where heart function has all but failed and conventional medical treatment is unable to help.

Data by
Linköping university,
Sweden

BIG BRAIN ATLAS

Brain Atlas, which are used by other scientists investigating specific parts of the brain. In this dataset you will be able to explore the highest resolution 3D Brain Atlas yet made of a human brain and learn more about the brain.

Data by
Jülich Research Centre,
Montreal Neurological
Institute

> STANDARD CONTENT PACKAGE HUMAN ANATOMY 3D PRINTING AND IMPLANTS

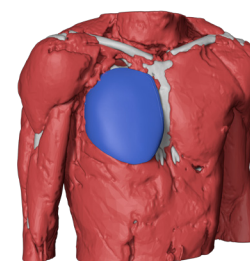
The Human Anatomy content package "3D Printing and Implants" will provide a number of examples of how CT-scanning, 3D modelling and 3D printing can be used to create custom-made implants that are perfectly fitting each patient's anatomy for low invasive treatment of pathologies such as Pectus Excavatum, Poland Syndrome and Airway Stenosis Disease.



AIRWAY STENOSIS DISEASE

Chest CT scan with contrast of a living patient suffering from an airway stenosis. The patient cannot breathe normally because of a reduction of the section of the airway. Treatment consists in implanting an airway stent to get a normal airway section.

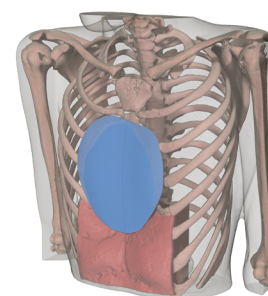
Data by
IMA Solutions SARL,
France



POLAND SYNDROME

CT scan acquisition of a living patient suffering of a Poland Syndrome congenital disease. Poland Syndrome is a partial or total lack of the Pectoralis Major muscle. It can be corrected by inserting a 3D custom-made implant trough surgery.

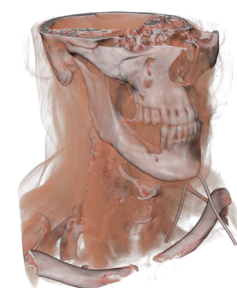
Data by
IMA Solutions SARL,
France



PECTUS EXCAVATUM

CT scan acquisition of a living patient suffering of a Pectus Excavatum congenital deformation. Pectus Excavatum is a deformation of the ribs and sternum. With a frequency of 1 over 300 births, it is the most common thoracic congenital deformation. This patient underwent a surgery to place a 3D custom-made implant to correct the deformation.

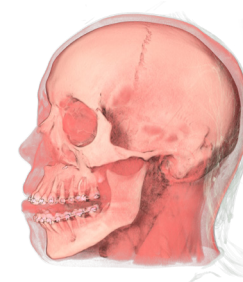
Data by
IMA Solutions SARL,
France



MANDIBULAE RESECTION – CANCER

Face CT scan of a living patient. The mandibulae bone as been partially resected to remove a cancer tumor. Patient will undergo a surgery to reconstruct the missing mandibulae part.

Data by
IMA Solutions SARL,
France



MAXILLOFACIAL – PROTRUDING MANDIBULAE

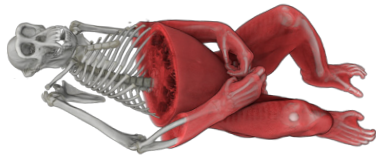
Face CT scan of a living patient. The mandibulae bone is protruding meaning a bad alignment of upper and lower teeth. The patient will undergo a surgery to realign correctly the mandibulae with the maxillary bone.

Data by
IMA Solutions SARL,
France

> STANDARD CONTENT PACKAGE ANIMAL ANATOMY

Our Animal Anatomy content package is a great tool for learning more about animals and their living conditions. Based on CT-scans of animals from Kolmården animal and wildlife park, the largest park in Northern Europe, we have created a content package of fascinating animals. By taking part of the annotations about the animals and virtually explore the anatomy, you will receive insights about the fascinating animals included in this content package.

This content package is suitable for education and public outreach at aquariums, animal and wildlife parks, natural history museums, science centers etc.



CHIMPANZEE (PAN TROGLODYTES)

The chimpanzee is an 11-year-old male. He weighs 65 kg and comes from the Kolmården Zoo in Sweden. A chimpanzee's skeleton is similar to a human's but differs in a number of ways.

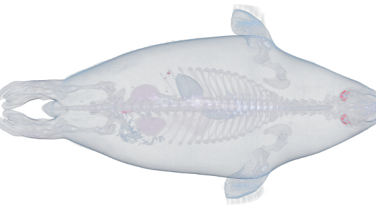
Data by
Kolmården animal and wildlife park, Sweden.



GOLDEN EAGLE (AQUILA CHRYSAETOS)

This eagle was found in the southern part of Sweden in 2008. It was injured in one of the wings and was placed in rehabilitation for a couple of weeks. The eagle was then transferred to the Kolmården zoo. It's a female and weighs 5.2 kg.

Data by
Kolmården animal and wildlife park, Sweden.



GREY SEAL (HALICHOERUS GRYPUS)

A fullbody scan of a The grey seal is found on both shores of the North Atlantic Ocean. It is a large seal, with males reaching 3 m long and weighing between 170 and 310 kg. The seal was born at the Kolmården zoo in Sweden in 2009. It was only 28 days old when it was scanned in the CT-scanner.

Data by
Kolmården animal and wildlife park, Sweden.



LION (PANTHERAL LEO)

The lion is a three year old female called "Shira". She comes from the Kolmården Zoo in Sweden and weighs 122 kg. An old fracture can be seen in one of the vertebrae close to the scapula and pieces of bone are visible in the stomach.

Data by
Kolmården animal and wildlife park, Sweden.



MOOSE (ALCES ALCES)

The moose is the largest living species in the deer family. Moose typically inhabit the boreal forests of the Northern Hemisphere in temperate to subarctic climates. Their diet consists of both terrestrial and aquatic vegetation. The most common moose predators are wolves, bears and humans.

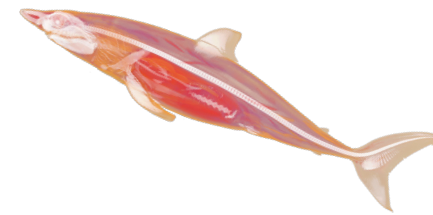
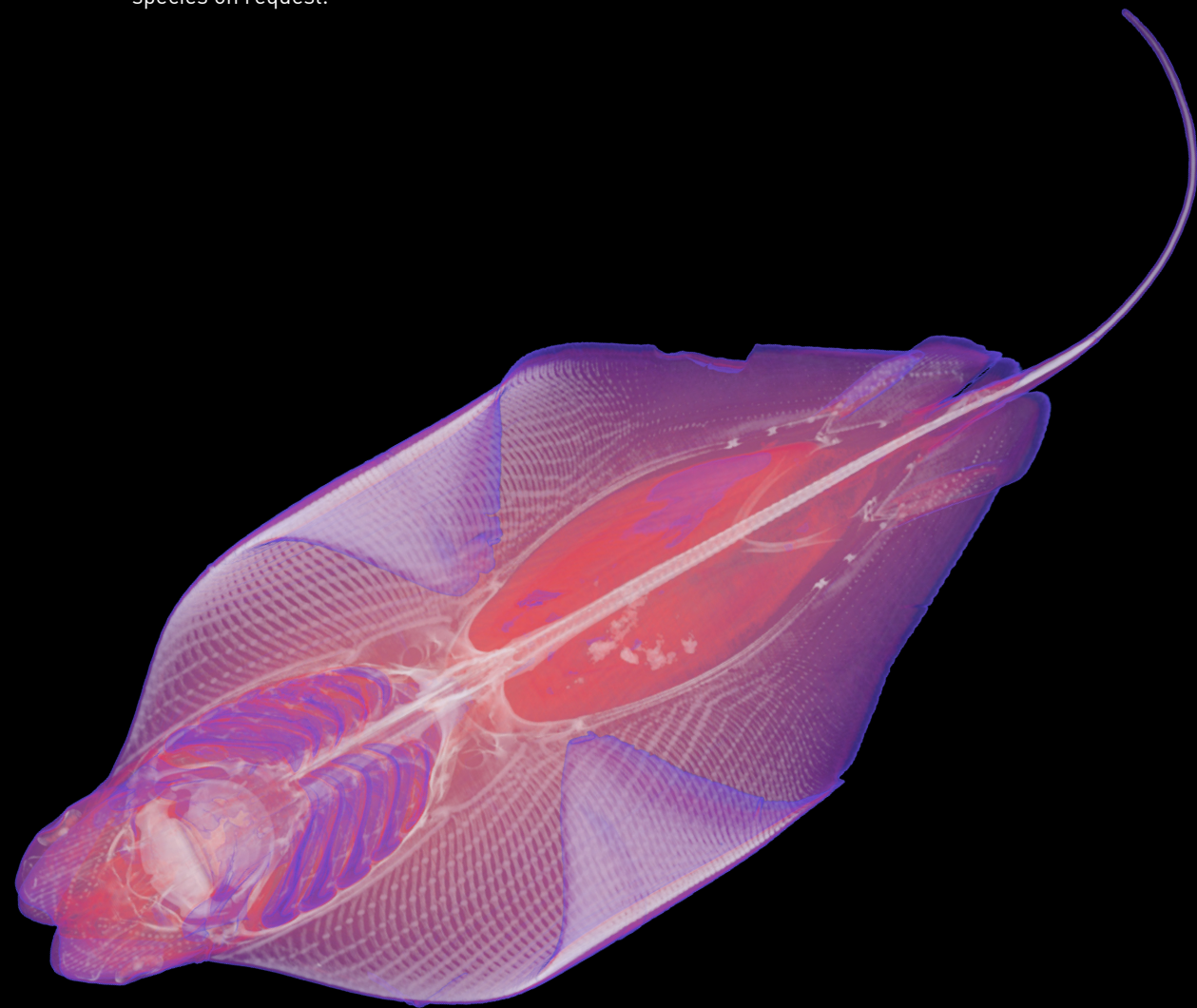
Data by
Kolmården animal and wildlife park, Sweden.

> STANDARD CONTENT PACKAGE

SHARKS & RAYS

A collection of dataset featuring a selection of some of the most common sharks and rays. This unique content package is developed in an exclusive collaboration with shark expert and researcher Professor Gavin Naylor at Hollings Marine Lab, US. The package is a subset of a database called "Chondrichthye", which allows users to explore the evolution of over 1,000 species of sharks and rays.

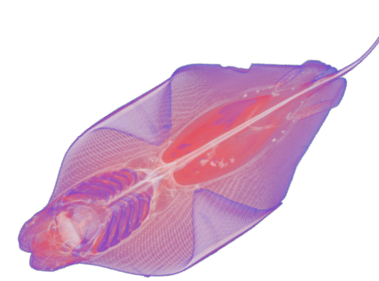
This content package is suitable for education and public outreach at aquariums, animal and wildlife parks, natural history museums, science centers etc. Interspectral can add further species on request.



SHORT-FIN MAKO (ISURUS OXYRINCHUS)

The short-fin Mako is one of the most beautiful of all of the sharks. It is also the fastest with burst speeds topping 60 mph. Known for making spectacular leaps 6m out of the water, short-fin makos are highly sought after by sports fishermen. [Juvenile female]

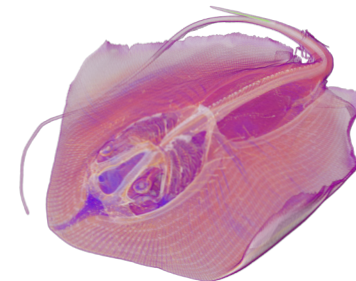
Data by
Professor Gavin Naylor,
University of Florida, US



COWNOSE RAY (RHINOPTERA BONASUS)

Cownose rays are probably best known for their spectacular seasonal aggregations where thousands of individuals migrate en masse along the Western North Atlantic coast. [Female]

Data by
Professor Gavin Naylor,
University of Florida, US



SOUTHERN STINGRAY (HYPANUS AMERICANUS)

Southern stingrays occur in coastal waters of the western Atlantic Ocean Gulf of Mexico, Caribbean Sea, to Brazil. They can often be found around coral reefs and sea grass beds. [Male]

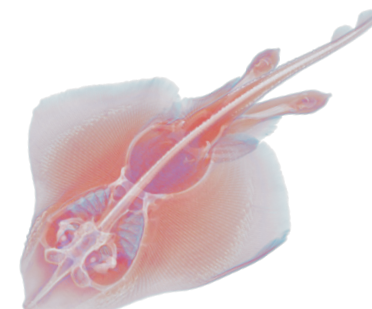
Data by
Professor Gavin Naylor,
University of Florida, US



SCALLOPED HAMMERHEAD (SPHYRNA LEWINI)

The scalloped hammerhead has an unusual and distinctive structure of their heads, which are flattened and laterally extended into a "hammer" shape called a cephalofoil, giving the species its characteristic "scalloped" appearance. [Female]

Data by
Professor Gavin Naylor,
University of Florida, US



CLEARNOSE SKATE (ROSTRORAJA EGLANTERIA)

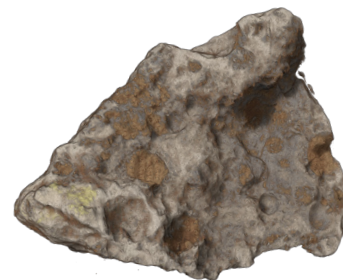
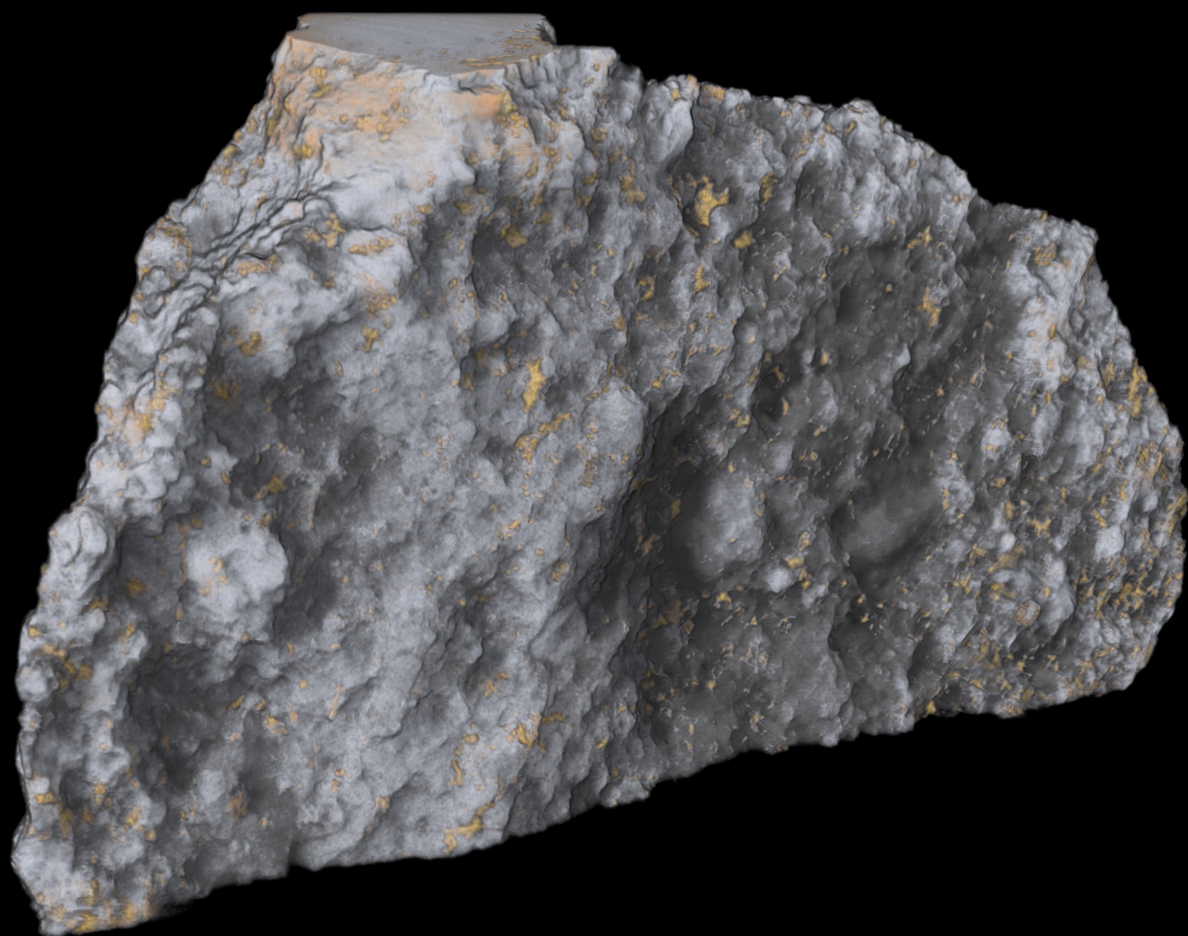
The Clear-nose skate is common in waters off the North West Atlantic coast from New England to the Gulf of Mexico. It is widely used in biomedical research as it is easy to maintain in laboratory conditions. Like all skates, it lays eggs in capsules known as "mermaids purses" that often wash up on shores.

Data by
Professor Gavin Naylor,
University of Florida, US

> STANDARD CONTENT PACKAGE METEORITES

A collection of meteorites from the Field Museum of Natural History in Chicago, US. This unique content package was developed in a collaboration with the researchers at Field Museum which holds one of the largest and most important natural history collections in the world. The content package contains a selection of important meteorites from the world-class meteorite collection at museum, one world's largest meteorite collections.

This content package is suitable for education and public outreach at natural history museums, planetariums, science centers etc.



ALLENDE - A CARBONACEOUS CHONDRITE

Get the inside story on a true rock star. The Allende meteorite is one of the most famous - and well studied - meteorites in the world. The silicate body of the meteorite contains carbon (= carbonaceous) and surrounds small mineral inclusions called chondrules (= chondrite). Only about 4% of all meteorites are carbonaceous chondrites.

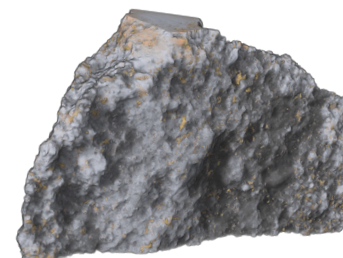
Data by
The Field Museum of
Natural History, Chicago,
US



NWA 11115 - A MARTIAN METEORITE

NWA stands for Northwest Africa, where this meteorite was found in 2015. The number 11115 means that this is the 11,115th meteorite found in the region. In 2016 Field Museum scientist, together with an international team of colleagues, confirmed that this is a piece of Mars's crust knocked from the surface if that planet by an asteroid.

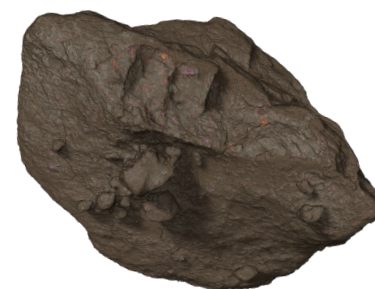
Data by
The Field Museum of
Natural History, Chicago,
US



BOTTEN 003 - A FOSSIL METEORITE

466 million years ago two large asteroids collided violently, sending meteorites raining down on Earth across the Globe. This one fell to the seafloor, where it was preserved as a fossil until it was uncovered in a quarry in Sweden un 2002. See what we're learning from this ancient space rock.

Data by
The Field Museum of
Natural History, Chicago,
US



CHELYABINSK

The Chelyabinsk meteorite captured the world's attention when it exploded in Russia in 2013. Scientists study fragments like this one to understand their cosmic origins. See what we're discovering.

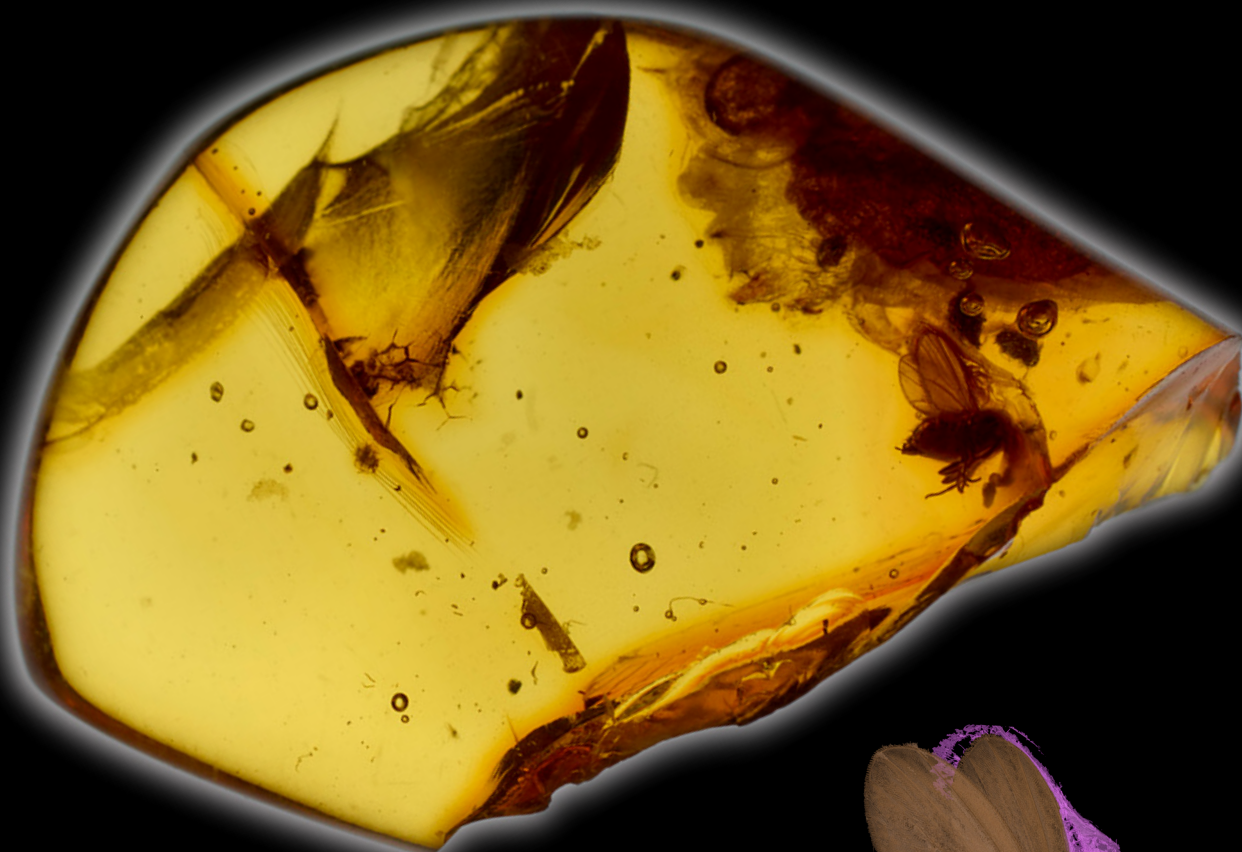
Data by
The Field Museum of
Natural History, Chicago,
US



STANDARD CONTENT PACKAGE

FOSSILIZED INSECTS IN AMBER

A collection of fossilized insects in amber from the Field Museum of Natural History in Chicago, US. This unique content package was developed in a collaboration with the researchers at the Field Museum. This content package is suitable for education and public outreach at natural history museums, planetariums, science centers etc.



FLY IN AMBER

Amber—fossilized tree resin—can preserve the anatomy of a trapped insect down to the tiny hairs on the legs of a fly. Now with new powerful x-rays, scientists can see more than ever.

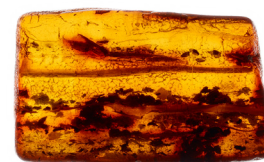
Data by
The Field Museum of
Natural History,
Chicago, US



ROVE BEETLE IN AMBER

This rove beetle specimen is surrounded by cracks and air bubbles, making details hard to see with traditional microscopes. With high-resolution scans, scientists can remove obstructions and get a close look at and inside the specimen.

Data by
The Field Museum of
Natural History,
Chicago, US



SPIDER IN AMBER

Picking out the spider in this amber piece isn't easy for the untrained, or even trained, eye. The specimen is hidden by wood pieces. However, thanks to powerful x-rays, we can finally take a close look.

Data by
The Field Museum of
Natural History,
Chicago, US

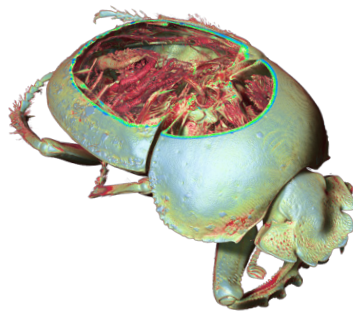


STANDARD CONTENT PACKAGE

INSECTS

Explore the amazing world of insects in this selection of award-winning 3D Micro-CT scans by insect researcher Professor Javier Alba-Tercedor at University of Granada, Spain.

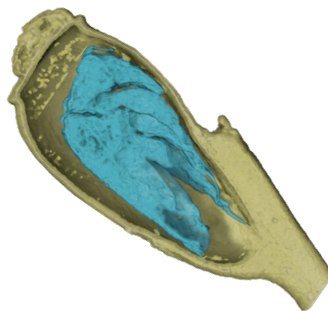
This content package is suitable for education and public outreach at natural history museums, science centers etc.



DUNG BEETLE (SCARABAEUS SP.)

A 3D scan of an dung beetle curated, scanned and interpreted Professor Javier Alba-Tercedor at University of Granada, Spain.

Data by
Professor Javier
Alba-Tercedor at
University of Granada,
Spain



HUMAN LOUSE EGG (PEDICULUS HUMANUS CAPITIS)

A 3D scan of an human louse egg curated, scanned and interpreted Professor Javier Alba-Tercedor at University of Granada, Spain.

Data by
Professor Javier
Alba-Tercedor at
University of Granada,
Spain



DESERT ANT (CATAGLYPHIS VELOX)

A 3D scan of an desert ant curated, scanned and interpreted Professor Javier Alba-Tercedor at University of Granada, Spain.

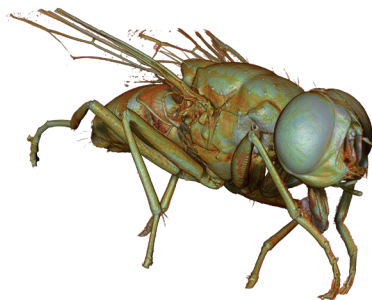
Data by
Professor Javier
Alba-Tercedor at
University of Granada,
Spain



MASSON BEE (OSMIA RUFA)

A 3D scan of an masson bee curated, scanned and interpreted Professor Javier Alba-Tercedor at University of Granada, Spain.

Data by
Professor Javier
Alba-Tercedor at
University of Granada,
Spain



HOUSE FLY (MUSCA DOMESTICA)

A 3D scan of an house fly curated, scanned and interpreted Professor Javier Alba- Tercedor at University of Granada, Spain.

Data by
Professor Javier
Alba-Tercedor at
University of Granada,
Spain

> SPECIAL CONTENT PACKAGE EGYPTIAN MUMMY - NESWAUI

complete interactive application making it possible to explore the mummy Neswau currently in the collection of Museum of Mediterranean and near eastern antiquities, Stockholm, Sweden. Neswau, an ancient Egyptian priest, has been resting inside his intact wrappings for more than two thousand years. Unlike many other mummies that came to Europe in the 19th century, Neswau's mummy was never unwrapped and its contents stayed unrevealed. It is not until now, with the aid of modern scanning and visualization technology, that we can investigate the remains of Neswau and his burial equipment, inside-out, without causing physical damage.

Explore the mummy yourself by peeling off layer by layer and discover through this interactive visualization what is hidden within its wrappings! Study the details of the exquisitely inscribed and decorated coffins, made of heavy wooden planks imported from a foreign land. Stare face-to-face with Neswau himself as you find his gilded face mask and colourful cartonnage cover inside the inner coffin, there to magically preserve Neswau's body and identity for all eternity.

PACKAGE INCLUDES:

- Color 3D print of Neswau's inner coffin
- 3D printed Golden Falcon amulet
- High resolution photos and video material from the project process
- 4 Datasets including a high resolution full body CT scan and photogrammetry scan of Neswau





SPECIAL CONTENT PACKAGE

MUMMIES BY THE FIELD MUSEUM

This content package – first created for the acclaimed ‘Mummies’ travelling exhibition produced by the Field Museum – consist of two interactive experiences, one featuring Egyptian mummies and one Peruvian mummies. The exhibition ‘Mummies’ premiered 2016 and have since then been displayed at Los Angeles Natural History Museum and American museum of Natural History.

The interactive experience allow visitors to explore inside the wrappings of mummified human and animal remains. By featuring data garnered from CT scans via a touch screen interface, visitors can interact with selected mummies in a variety of ways: They can remove layers of ornament and wrapping, examine details of the mummification process, and “section” mummies to examine their skeletons and see internal elements, such as organ preservation.

Embedded within each mummy dataset is a series of informational popups that highlight important and unique aspects and reveal internal details that scientists have learned using CT scan technology.

EGYPTIAN MUMMIES

The Egyptian experience features four mummies: the Gilded Lady, an adult male, a mummy from the pre-dynastic period, and a mummified gazelle.



PERUVIAN MUMMIES

The Peruvian table will feature three: a child who was buried with several figurines and two mummified groupings, one a mother and child and the other an adult with two children. Visitors can choose which mummy to explore from a menu screen.





HARDWARE REQUIREMENTS

Hardware

> HIGHLIGHTS

Inside Explorer is developed to last while being used by millions. It is essential that the hardware that displays Inside Explorer at public venues, is developed for the same purpose. Therefore, Interspectral works closely with its customers to ensure the right hardware is installed to meet the demands of the venue.

Inside Explorer is available in two flexible options:

- › as software only, or
- › as a turn key solution.



> SOFTWARE ONLY

Inside Explorer is available as software only and can be installed and used on everything from touch laptops, to large scale multi-touch tables and interactive white boards. See below the system requirements.



SYSTEM REQUIREMENTS

Display	Aspect ratio: 16:9
Resolution	1920 x 1080 or higher, 4K is recommended
Touch Technology	Windows native touch input (touch is not a requirement)
OS	Windows 10, version 1709 or later. CPU: Intel Core i5 / i7, or better
RAM	Minimum 8 GB, recommended 16 GB
Storage	SSD, minimum 128 GB
GPU	Minimum: Nvidia Quadro P4000 or Nvidia RTX 2060 Recommended: Nvidia Quadro RTX A4000 or Nvidia RTX 3080

> TURN KEY SOLUTIONS

Inside explorer can be delivered as a turn key solution on premium multi-touch tables designed for use in demanding environments such as unattended public settings. The tables are equipped with powerful and high-quality components from our industry leading supplier to ensure a great and reliable 24/7 user experience. These tables are available in sizes from 40" up to 65".



- > Ruggedized metal construction
- > 4K Ultra High Definition (UHD)
- > Projected-capacitive touch technology
- > Professional OLED display
- > Industry leading components: Intel® Xeon® / NVIDIA Quadro® 3 Years warranty.
- > Table stand made of steel and standard coated in black color
- > Touchscreen with 4K Ultra HD resolution
- > Brightness touchscreen, 450nit
- > Monitor completely (edge-to-edge) finished with a tempered glass panel
- > Glass on the bottom equipped with PCAP touch foil (can't be damaged when working on the touchscreen)
- > 10 simultaneous touchpoints



© 2020 : Interspectral AB. All rights reserved. All brands and trade names are the property of their respective owners.

|Interspectral|™

Interspectral AB is a Swedish company with ambition to dramatically improve the learning experience in museums and science centers by making the inside visible. Our touch table solutions including CT-scanned content generates a deeper understanding of the subject and add a completely new dimension to the learning experience.

CONTACT

Interspectral AB, Garvaregatan 4C, 602 21 Norrköping, Sweden, +46 (0)11 4739530
info@interspectral.com | www.interspectral.com